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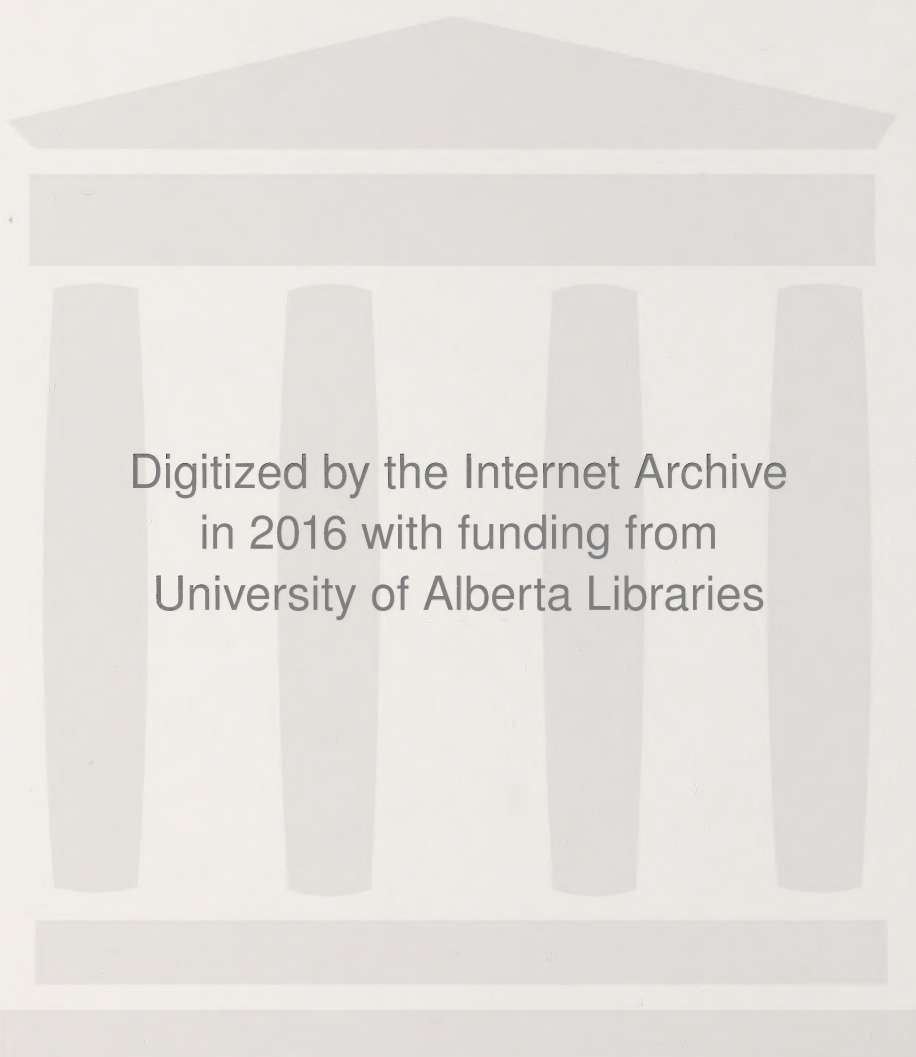
Mathematics



Module 4



**Distance
Learning**



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Mathematics

Module 4



**Distance
Learning**

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Module 4
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Learning Technologies Branch
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This document is intended for

Students	✓
Teachers	✓
Administrators	
Home Instructors	✓
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Other	



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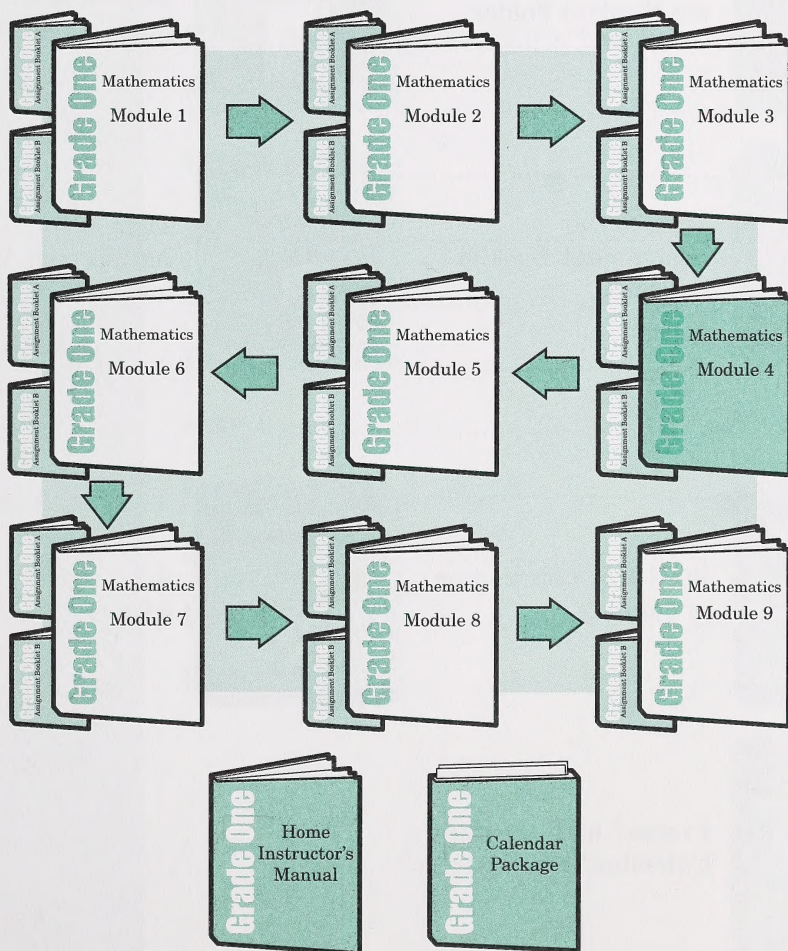
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Course Overview and Basic Components

Welcome to the Grade One Mathematics program.

The booklet you are presently reading is called a Student Module Booklet. It will take you through the course and show you, step by step, what to do with the student and how to do it. The activities you do will prepare the student for the assignments.

Grade One Mathematics contains nine modules. Each module has two Assignment Booklets. The module you are working on is highlighted in a darker colour. The two other basic course components—a Home Instructor's Manual and a Calendar Package—are also highlighted.



Visual Cues

Throughout the Grade One Mathematics program, you will find visual cues that indicate a material needed or an activity to carry out. Read the following explanations to discover what each icon prompts you to do.

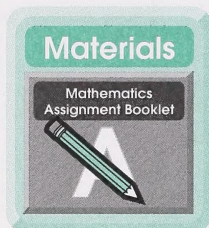
Icons: Materials



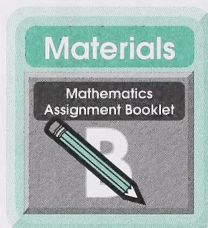
Place an item in the Student Folder.



Turn to the Home Instructor's Manual for further information.



Turn to the Assignment Booklet indicated.

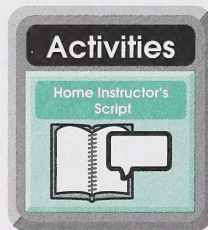


Turn to the Assignment Booklet indicated.

Icons: Activities



Read this information to yourself.

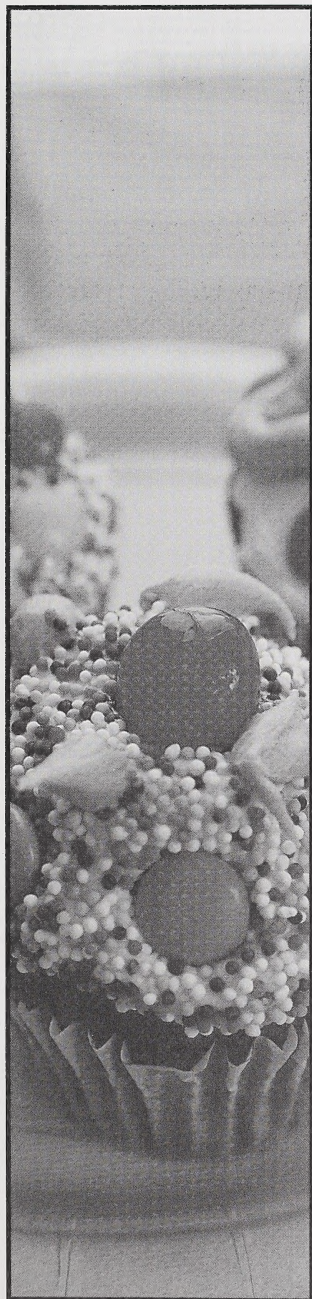


Read this information with the student.



Proceed with the daily Calendar Time activity.

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Mathematics

Module 4 Overview

Welcome to Grade One Mathematics Module 4.

In this module, your student will study addition and subtraction facts to eight through everyday problem-solving activities. The student will experience addition and subtraction through combining, comparing, and separating collections of manipulative objects.

Instructional goals of this module are for the student to do the following:

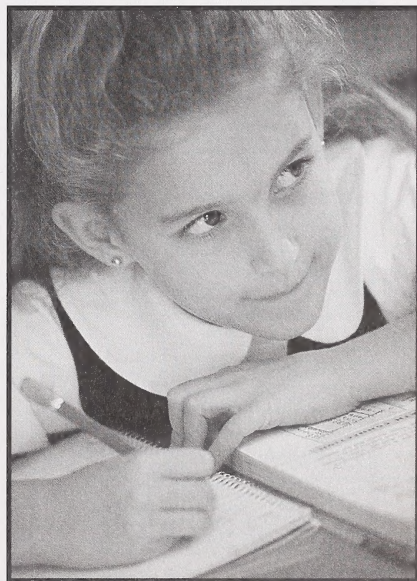
- connect real-life experiences and language with the mathematical language of each operation
- develop an understanding of the relationship between addition and subtraction
- learn how to add and subtract, and recognize when to apply each operation
- begin to recall basic facts quickly

You are encouraged to build on what the student already knows about addition and subtraction. Counting continues to be important. The student needs to know how to count forward, backward, and by groups of two or more.

Each day's lessons has four main elements. All four are important parts of the program.

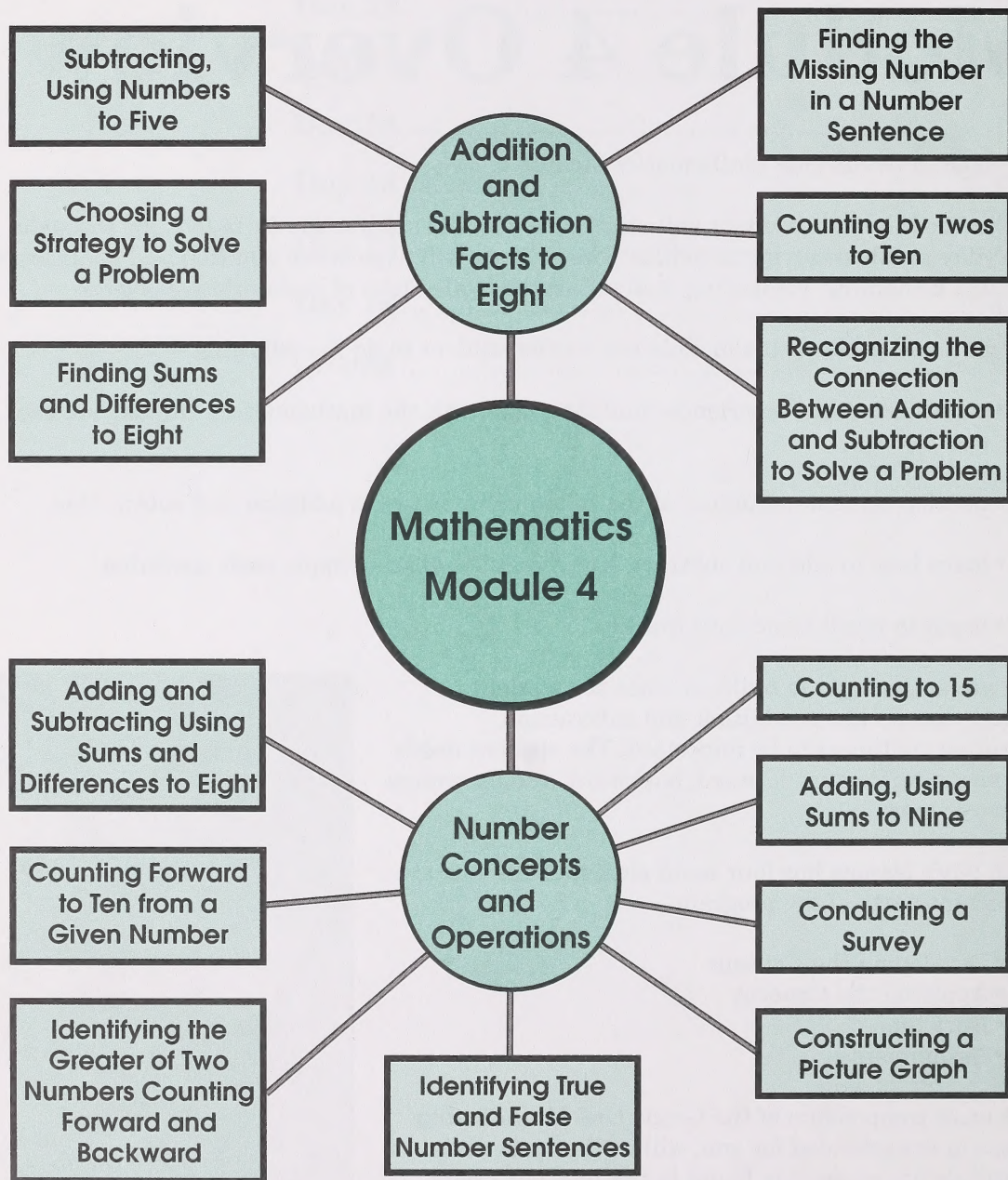
- Developing the Concept
- Applying the Concept
- Enrichment
- Assignments

The basic components of the Grade One Mathematics program are provided for you, while other practical materials are commonly found in the home or easily made. Throughout this program, the practical, hands-on materials used to teach the concepts are referred to as *manipulatives*.

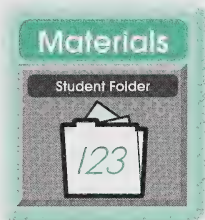


Module Web Chart

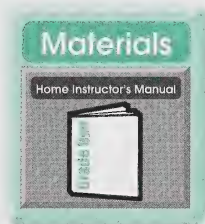
This chart highlights the main mathematical topics for this module.



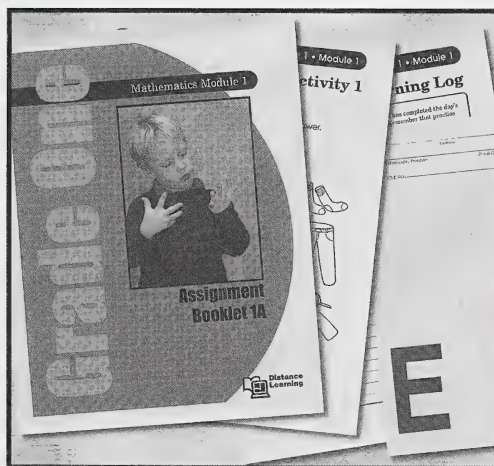
Mathematics Module Submissions



Place completed items in the Student Folder when you see this icon. On Day 9 and Day 18 of each module, you will find a checklist in the Assignment Booklet to help you compile items for submission to the child's teacher. The teacher will let you know when to provide these items for marking.



Note: The Student Folder is not included with the basic course components. Refer to the Home Instructor's Manual for information on the Student Folder.



Calendar Time



Many essential concepts are learned through the calendar activities that begin each lesson. If your student is not enrolled in the accompanying Grade One Thematic program, refer to the Calendar Package for information, activities, and resources.

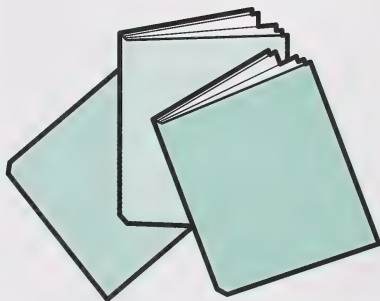
Additional Resources

The basic mathematics resources that the student needs for this module are provided. You could extend these basic resources with additional ones from a public or school library. Listed below are concept-related books, songs, and rhymes that could enrich this module. A trip to the library in search of these resources may be a delightful beginning to your module. In addition, you could investigate the many games and computer programs on the market that may enhance your student's learning opportunities.

Addition and Subtraction Concepts

Books

- Adams, P. *There Were Ten in the Bed*. 1979.
Anno, M. *Anno's Counting House*. 1982.
Bogart, J.E. *Ten for Dinner*. 1989.
Browner, Barbara. *Annie's Pet*. 1989.
Burningham, John. *Mr. Gumpy's Outing*. 1970.
Byer, C. *Henny Penny*. 1981.
Carve, Eric. *The Hungry Caterpillar*. 1969.
Christelow, E. *Five Little Monkeys Jumping on the Bed*. 1989.
Crowther, R. *The Most Amazing Hide and Seek Counting Book*. 1981.
Crystal, Eileen. *Five Little Monkeys Jumping on the Bed*. 1989.
Demarest, C.L. *No Peas for Nellie*. 1988.
Demi. *Demi's Count the Animals One-Two-Three*. 1986.
de Paola, Tomie. *Too Many Hopkins*. 1989.
Duke, K. *Seven Froggies Went to School*. 1985.
Gackenback, D. *A Bag Full of Pups*. 1983.
Geringer, L. *Three Hat Day*. 1985.
Gisler, David. *Addition Annie*. 1991.
Hawkins, C. *Adding Animals*. 1983.
Hooper, M. *Seven Eggs*. 1985.
Hoguet, S.R. *I Unpacked My Grandmother's Trunk*. 1983.
James, S. *The Day Jake Vacuumed*. 1989.
Kahn, Fernando. *The Family Minus*. 1977.
Leedy, L. *A Number of Dragons*. 1985.
Mayer, M. *Hiccup*. 1976.
Noble, T.H. *The Day Jimmy's Boa Ate the Wash*. 1980.
Sis, P. *Going Up!* 1989.
Tolstoi, A. *The Great Big Enormous Turnip*. 1968.
Wahl, J., and S. Wahl. *I Can Count the Petals of a Flower*. 1985.
Walsh, Ellen Stroll. *Mouse Count*. 1991.
Whitney, David C. *Let's Find Out About Addition*. 1966.
Zolotow, C. *One Step, Two . . .* 1981.



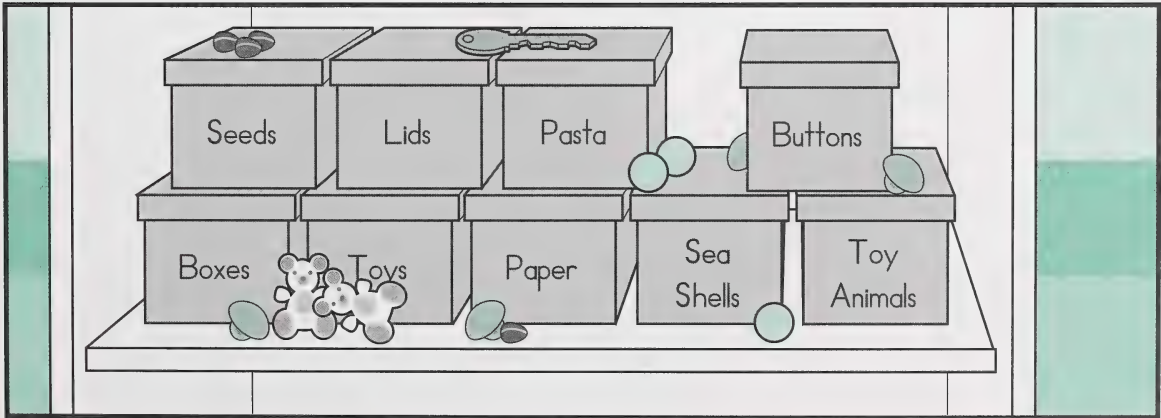
Songs and Rhymes

“Five Little Ducks”
“Five Little Frogs”
“Five Little Monkeys”
“Five Little Pumpkins”
“Four Hugs a Day”—Charlotte Diamond
“Let’s Do the Numbers Rumba”
“Old John Braddle-um”
“Once I Caught a Fish Alive”
“One Man Went to Mow”
“One Potato, Two Potato”
“One, Two, Buckle My Shoe”
“One, Two, Three, Four, Five”
“Over in the Meadow”

“10 Crunchy Carrots”—Charlotte Diamond
“Ten Little Kittens”
“There Were Ten in a Bed”
“This Old Man”
“Round the Mulberry Bush”
“The Old Woman Who Lived in a Shoe”



Addition and Subtraction Concept Manipulatives





Social



Physical



Intellectual



Creative



Emotional

Home Schooling: Teaching the Whole Child

Day 1



Calendar Time

Time recommended: 30 minutes

If your student is enrolled in the accompanying Grade One Thematic program, you will already have completed Day 1, Calendar Time before turning to this Mathematics Module 4 booklet. In that case, proceed directly with the remainder of Math Time.

If your student is not enrolled in the accompanying Grade One Thematic program, then refer to the Calendar Package for further information before proceeding with today's lesson.

Focus for Today

Time recommended: 45 minutes

- subtracting, using numbers to five



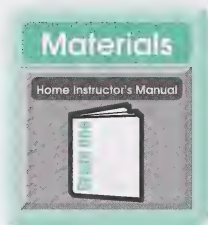
Vocabulary (spoken only)

Look for the following words throughout today's lesson. These words may be used in context and, if introduced to the student, are spoken only, so it is not necessary to review the list with the child. Students at this level are not required to read, spell, or write these words, with the exception of the number words from zero to ten.

subtraction
take away
comparison
how many more

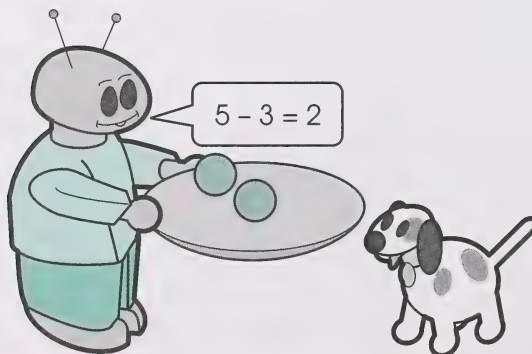
Materials Required

Certain materials are required on a regular basis throughout the Grade One program. These are the basic school supplies, such as pencils, paper, glue, and scissors. If your student is not registered in the accompanying Grade One Thematic program, then prepare a box containing these materials for your use during the Grade One Mathematics program.



See the Home Instructor's Manual for further information on the Master List of Required Materials.

- box containing required materials from the master list
- tray (optional)
- five objects of the student's choice (optional)
- counters (optional)



Activities

Teaching Tip

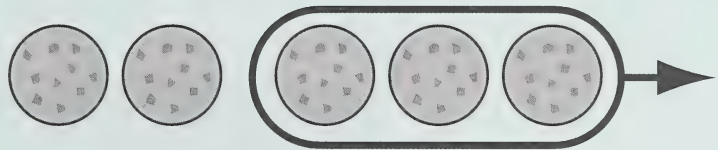


Throughout the Grade One Mathematics program, the student will experience three main **subtraction** situations.

• Take-away

This is the easiest for children to understand. It involves taking a subset away from an original set and observing the difference.

Susan had 5 cookies. She gave 3 to her brother. How many does she have left?



$$5 - 3 = 2$$

• Comparison

This involves matching two sets through one-to-one correspondence and noting the number of objects in one set that have no matching object in the other set.

Shannon has 5 candies and Sean has 4 candies. How many more candies does Shannon have than Sean?



$$5 - 4 = 1$$

• How Many More (Fewer) Are Needed?

A toy at the flea market costs 10 cents. Wayne has 8 cents. How much more money does he need to buy the toy?

Observe as your student works with take-away situations so you can comment later in Day 1: Learning Log.

Developing the Concept

Read the following rhyme twice with your student.

===== Five Little Snowflakes =====

Five little snowflakes, so shiny and bright,
Hung on a tree one beautiful winter night.
The wind came blowing, 'round and 'round,
And one little snowflake came tumbling down.



Four little snowflakes, so shiny and bright,
Hung on a tree one beautiful winter night.
The wind came blowing, 'round and 'round,
And one little snowflake came tumbling down.

Three little snowflakes, so shiny and bright,
Hung on a tree one beautiful winter night.
The wind came blowing, 'round and 'round,
And one little snowflake came tumbling down.

Two little snowflakes, so shiny and bright,
Hung on a tree one beautiful winter night.
The wind came blowing, 'round and 'round,
And one little snowflake came tumbling down.

One little snowflake, so shiny and bright,
 Hung on a tree one beautiful winter night.
 The wind came blowing, 'round and 'round,
 And one little snowflake came tumbling
 down.¹

Have the student raise a forearm to represent the tree and put up the appropriate number of fingers as the snowflakes for each verse. The student can use the other hand to whirl around the tree like the wind.



After each verse, have the student print the corresponding subtraction number sentence.

$$5-1=4$$

$$4-1=3$$

$$3-1=2$$

$$2-1=1$$

$$1-1=0$$

If your student has no difficulty stating the number sentence with one snowflake falling at a time, say the verse again with more than one snowflake falling at once. For example, “And three little snowflakes came tumbling down.”

¹ Cynthia Holley and Faraday Burditt, *Resources for Everyday in Everyday: A Teacher's Handbook of Preschool Activities* (Torrance, CA: Frank Schaffer Publications), 73. Reprinted by permission.

Applying the Concept

My Snowflake Booklet

Step 1: Help your student print the following sentences at the top of a piece of unlined loose-leaf paper.

Five snowflakes on a tree.
_____ came tumbling down.

Step 2: Ask the student to draw a tree with no leaves below the sentences.

Step 3: Have the student choose a number less than three and print the word for that number in the blank.

Five snowflakes on a tree.
Two snowflakes came tumbling down.

Step 4: Ask the student to draw or cut out paper snowflakes to match this subtraction situation. For example, if two snowflakes fell off the tree, the student would show three snowflakes on the tree and two on the ground.



Finally, have the student print the corresponding subtraction number sentence below the tree.

$$5 - 2 = 3$$

Step 5: Have the student repeat steps one to four with the remaining snowflakes on another sheet of unlined paper.

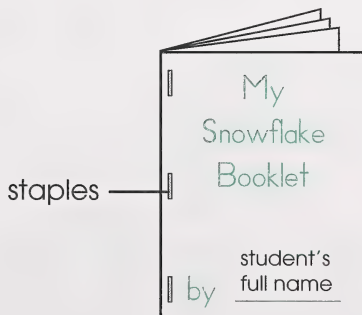


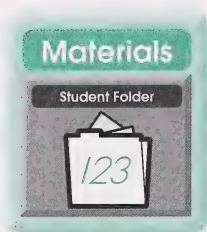
$$3 - 3 = 0$$

Step 6: Help the student create a cover page like the one below, making sure that important words are capitalized.



Step 7: Staple the cover page, the two subtraction pages, and a back page together to make a booklet.





Have the student print the abbreviated form of the module and day numbers, M4D1, on the back of the booklet.

Step 8: Encourage the student to talk about and read this booklet to others. Then place the booklet in the Student Folder.

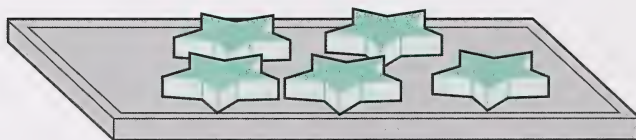
Enrichment (optional)

Enrichment activities are always optional. If you think at this point that the student needs extra help or a challenge, you could postpone the final assignment and Learning Log until after one or more of these activities.

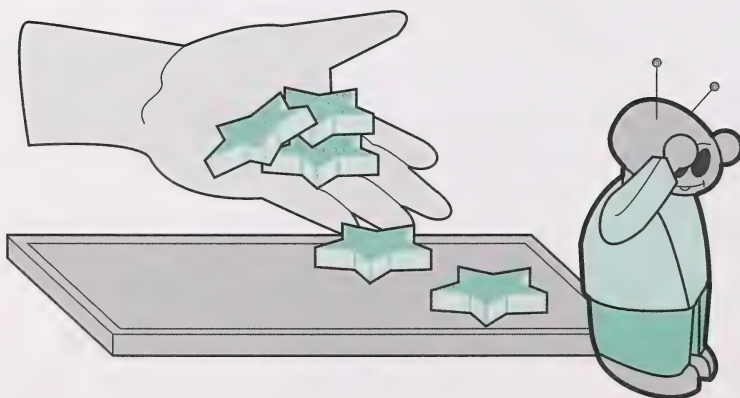
Note: Use of optional activities may require you to pace the student's progress in the rest of the module to accommodate special needs. For example, you may delay the final assignment until the student is ready for it. In that case, review the day's work before your student does the assignment.

1. Memory Subtraction

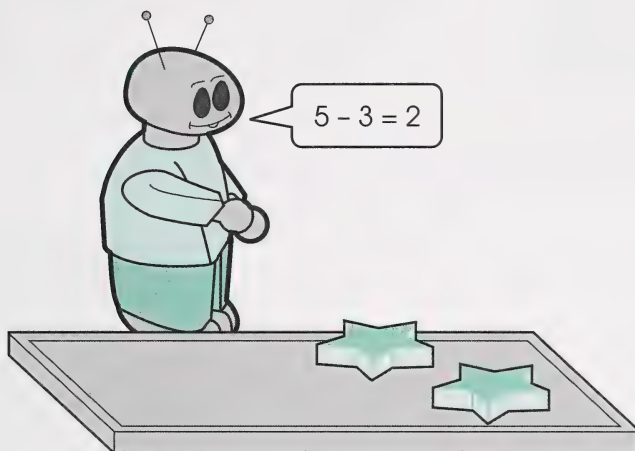
Step 1: Have the student choose five objects, and place them on a tray. Let the student look at the tray for ten seconds.



Step 2: Ask the student to look away while you remove some items.



Step 3: Let the student look at the tray again and say the subtraction number sentence. For example, if you took three items away, the subtraction sentence would be $5 - 3 = 2$.



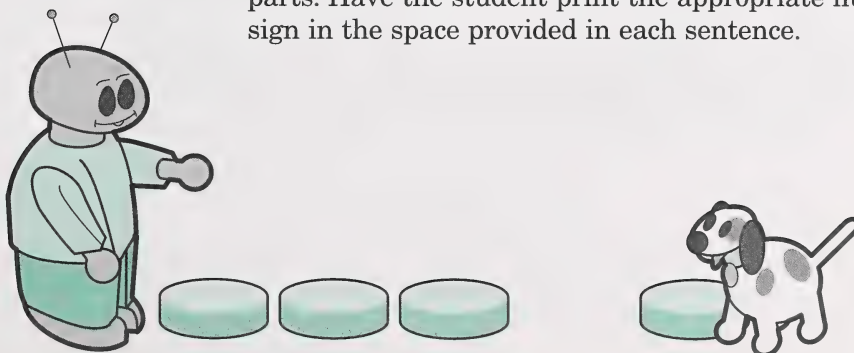
2. Detective Arithmetic

Step 1: Print five or more number sentences using numbers five or less on a piece of paper. As in the following examples, leave out one number or one mathematical sign from each.

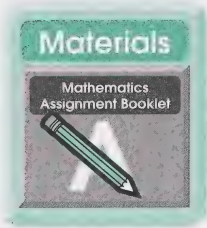
$$5 - \underline{\quad} = 3 \qquad 2 \underline{\quad} 3 = 5 \qquad 4 \underline{\quad} 2 = 2$$

$$5 - \underline{\quad} = 4 \qquad 1 + \underline{\quad} = 5$$

Step 2: The student could use counters to figure out the missing parts. Have the student print the appropriate number or sign in the space provided in each sentence.



Day 1 • Mathematics



Turn to Mathematics Assignment Booklet 4A, and follow the directions to do the assignment for Day 1.

Then complete Day 1: Learning Log. Under Student's Thoughts, print a sentence or two telling what the student thinks about this day's mathematics learning, for example, about the ability to subtract using numbers to five.



Day 2



Calendar Time

Time recommended: 10 minutes

If your student is not registered in the accompanying Thematic program, refer to the Calendar Package for further information.

Focus for Today

Time recommended: 45 minutes

- choosing a strategy to solve a problem
- subtracting, using numbers to five



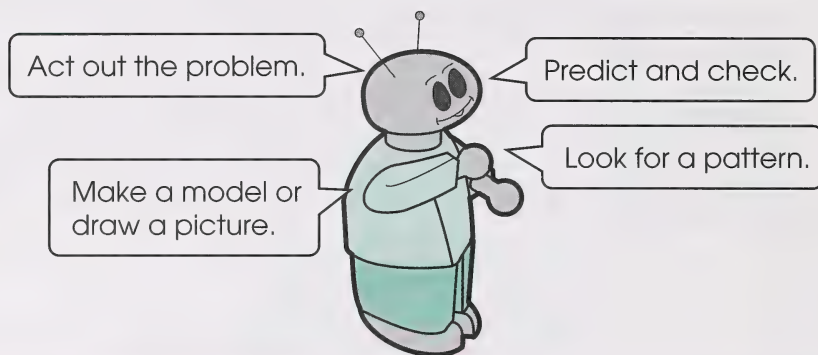
Vocabulary (spoken only)

strategy/strategies
 problem
 act out the problem
 predict and check

make a model or draw a picture
 look for a pattern

Materials Required

- box containing required materials from the master list
- collection of counters



Activities

Teaching Tip



Because people must solve problems daily, an educational goal for students is to learn skills that will solve a variety of problems. In mathematics, the skills taught are problem-solving **strategies**.

The following mathematical **strategies** are valuable at the primary level. Focus on them today during planning for problem solving.

- **Act out the problem.**

The student will go through the actions, either with others or by manipulating objects.

- **Predict and check.**

The student will make an educated guess based on important information and previous related knowledge and then check to see if the prediction is correct.

- **Make a model or draw a picture.**

The student will construct only what is essential to show the problem.

- **Look for a pattern.**

The student will identify a pattern in pictures or numbers.

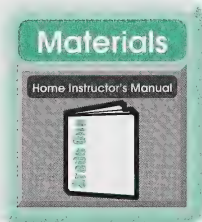
Comment on the student's use of these strategies later in Day 2: Learning Log.

Developing the Concept

Tell the student that today you will talk about mathematical problems and **strategies** to solve them.

Ask the student to explain what a **problem** is. Encourage a variety of answers.

If the student does not understand that a problem involves a situation in which a person wants something and does not immediately know what to do about it, guide the child to this realization.



Remove the Problem-Solving Strategies chart from the Appendix of the Home Instructor's Manual.

Discuss each strategy on the chart. Help the student tell how personal mathematical problems could be solved using each way on the chart. For example, the student might have the following personal mathematical problems and solve them with the strategies suggested:

- You gave 2 candies to Kim, 2 candies to Étienne, and 2 candies to Evelyn. How many candies did you give away? (Strategy: Act out the problem.)
- You predicted that you had 10 pennies in your piggy bank. To check your prediction, you counted the pennies. You were pleased that your prediction was correct, because now you could buy the candies that you wanted. (Strategy: Predict and check.)
- You were given 5 pennies. Your sister was also given 5 pennies. To figure out how many pennies you were both given, you drew pictures of all the pennies. Then you counted the pictures. (Strategy: Make a model or draw a picture.)
- You were challenged to draw the numbers that would come next in the following pattern.

3 3 7 3 3 7 3

You identified that the pattern repeated two number 3s and one number 7. (Strategy: Look for a pattern.)

Applying the Concept

You will find a list of problem-solving situations on the following pages.

Read these situations to your student, one at a time. Have the student listen carefully and repeat the important problem-solving information, such as the number in the problem. Help the student write down this information.

Discuss what problem-solving **strategies** the student would choose, and mention other ways if possible.



No one strategy is best for solving all problems. The student who knows a variety of strategies will have skills to solve many kinds of problems.

Throughout the problem-solving process, help your student as necessary, for example, by reading the problem more than once. Use the following script.



Listen carefully to the following word **problem**.

You can write down any important information that will help solve the **problem**.

Then show me the **strategy** you would use to solve the **problem**.

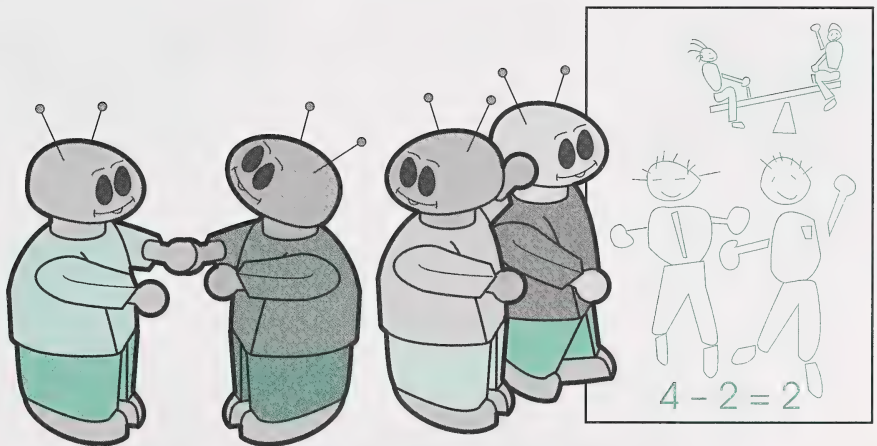
Read the first problem aloud.

4 children were at the playground.
2 children went home for lunch.
How many children were left at the
playground? ($4 - 2 = 2$)

Have the student repeat the important information from this problem—the numbers 4 and 2—and print these numbers on paper.

Then discuss the student's way of solving the problem, and challenge the student to think of other ways. For example, one way to solve this problem would be to act it out. Another way would be to draw an illustration on paper.

Ask the student to record the number sentence as well.



Use the same procedure for the following problems. After each situation, discuss the student's way of solving the problem, and consider other ways as well.

5 muffins were on a plate.
A boy ate 1.
How many were left? ($5 - 1 = 4$)

An explorer found the following markings on a cave wall. Can you see the **pattern**?



Is there a mistake in the pattern? (yes)

Draw the corrected pattern on your paper.



Add the next 2 shapes to your **pattern**.



Look at the numbers from 1 to 10.

1 2 3 4 5 6 7 8 9 10

Are there more numbers before or after the number 3? (after)

Make a **prediction**.

Check your prediction by counting the numbers before and after the number 3.

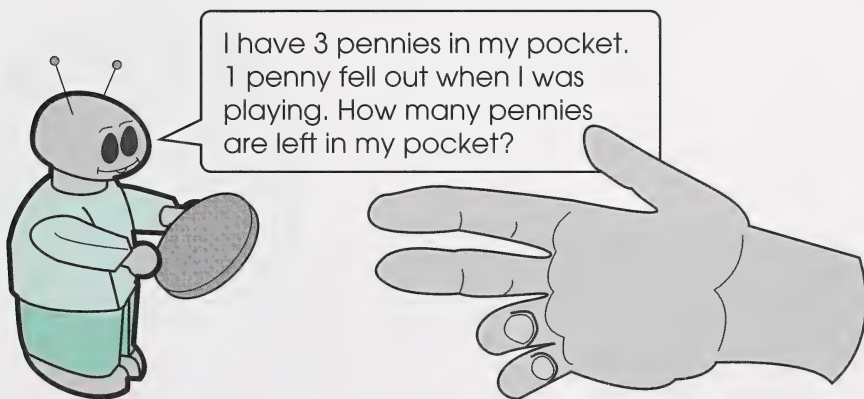
(Help the student count, if necessary.)

Was your prediction correct?

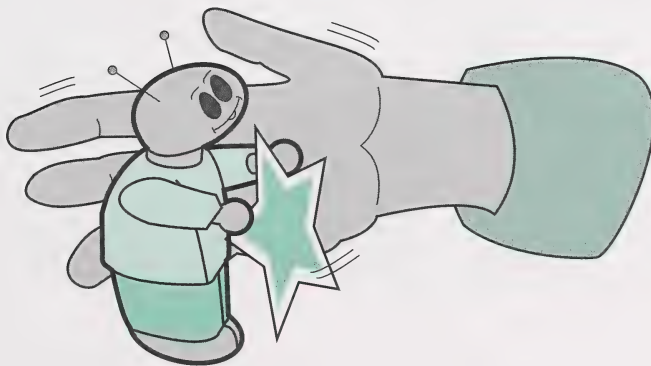
John had 5 pennies in his pocket.
1 penny fell out when he was playing.
How many pennies were left in his pocket?
 $(5-1=4)$

Enrichment (optional)

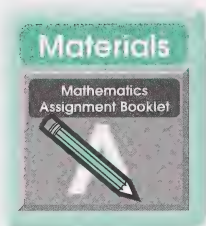
Take turns creating mathematical problems. Talk about the particular **strategy** used to solve each problem and other ways that would work.



Consider giving the student a pat on the back, a star, a stamp, or a sticker when the activity has been completed with care and effort.



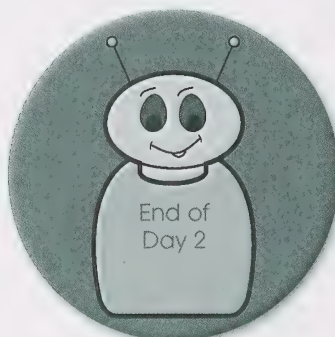
Day 2 • Mathematics



Turn to Mathematics Assignment Booklet 4A, and follow the directions to do Day 2: Assignment 1.

Next, follow the directions to do Day 2: Assignment 2.

Then complete Day 2: Learning Log. Under Student's Thoughts, print a sentence or two telling what the student thinks about this day's mathematics learning, for example, about the ability to choose problem-solving strategies.



Day 3



Calendar Time

Time recommended: 10 minutes

If your student is not registered in the accompanying Thematic program, refer to the Calendar Package for further information.

Focus for Today

Time recommended: 45 minutes

- adding and subtracting, using numbers to **six**
- reviewing problem-solving strategies: acting out the problem and drawing a picture



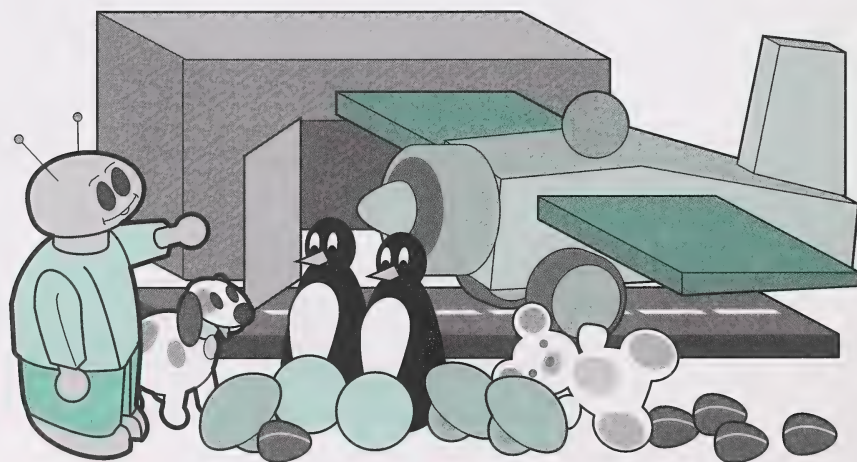
Vocabulary (spoken only)

Students at this level are not required to read, spell, or write these words, with the exception of the number words from zero to ten. A number word appears on the list below.

six
total
pantomime
acting out

Materials Required

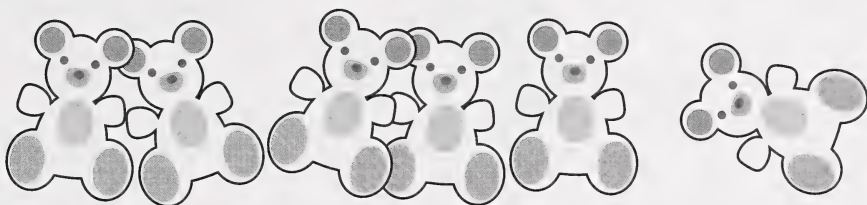
- box containing required materials from the master list
- collection of counters, such as toy animals, spoons, macaroni, buttons, or shells
- collection of toys and stuffed animals
- toy airplanes or cardboard airplane cutouts (optional)
- box to use as a hangar (optional)
- cardboard runway (optional)



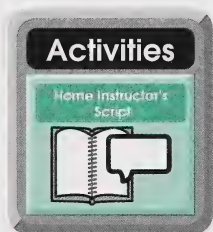
Developing the Concept

Recipes for Six

Help the student make a set of **six** objects from a collection of counters.



Instruct as follows.

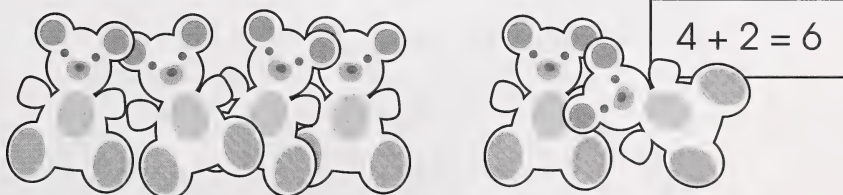


Today, you will work with number sentences that **total 6**.

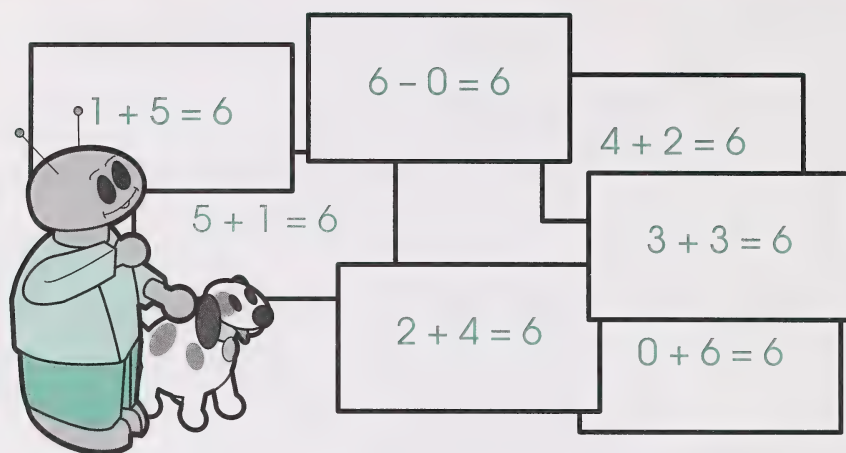
Count the objects in your set. (1, 2, 3, 4, 5, 6)

Use the objects in your set to discover some number sentences that show a sum or difference to 6.

When you discover a number sentence for the number 6, print it on a recipe card. (For example, the student may suggest $4 + 2$ or $6 - 0$. Help as necessary.)



See how many number sentences the student can discover. Remind the student that the number zero can also be used. Help as necessary. Have the student draw pictures for troublesome number sentences on the backs of the cards. Discuss and correct any errors.



Each number sentence is a recipe for 6. When you add or subtract the numbers in the **first** half of these number sentences, the answer is always 6.

Applying the Concept

Addition and Subtraction Pantomime

Tell the student that a **pantomime** is a story without words.

Use stuffed animals or other toys to act out addition and subtraction pantomimes with sums and differences to six. For example, show six stuffed animals playing on the floor and have two of them wave goodbye and leave.

Have the student describe what happened and give a subtraction statement, such as “Six stuffed animals were playing. Two animals went away. Six take away two leaves four.”

Coach the student as necessary, and state that the strategy of **acting out** is being used to solve these problems.

Continue until the student has practised a variety of sums and differences to six.

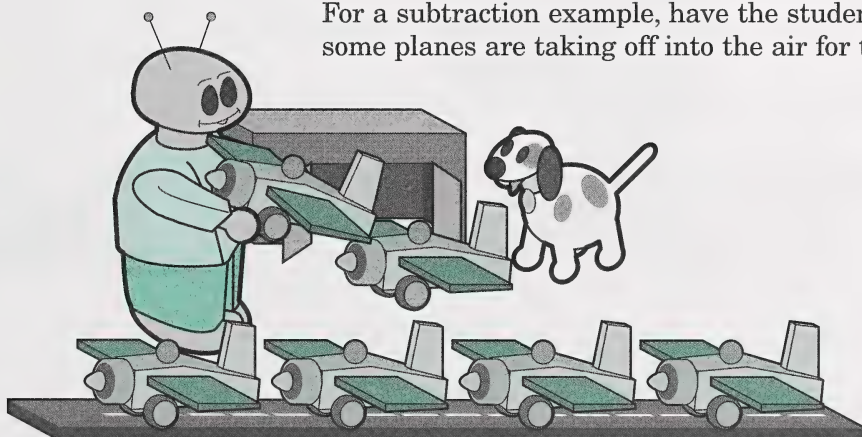
Enrichment (optional)

Airport

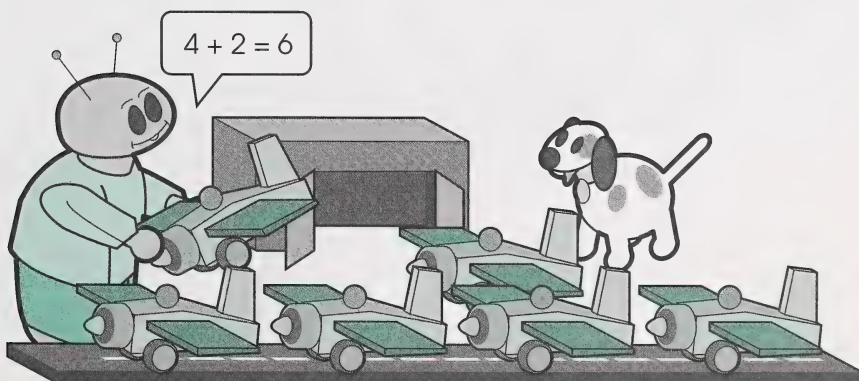
Step 1: Give the student a boxful of toy or cardboard airplanes to use as a hangar filled with aircraft. Ask the student to put a starting set of planes on a cardboard runway. Then add or subtract some planes.

For an addition example, have the student pretend that more planes are leaving the hangar to line up on the runway for takeoff.

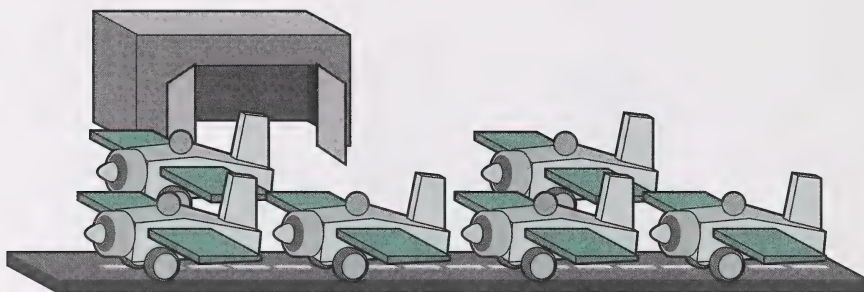
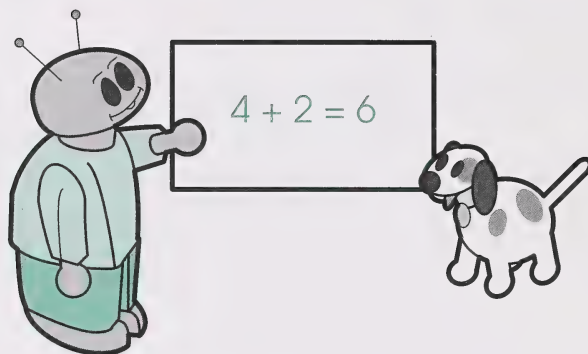
For a subtraction example, have the student pretend that some planes are taking off into the air for their flights.



Step 2: Have the student describe what happened, naming the number of planes there were to begin with, the number that were added or removed, and the total remaining number.



Step 3: Have the student print a corresponding number sentence.



Step 4: Take turns acting out and describing addition and subtraction situations.

Materials

Mathematics
Assignment Booklet



Turn to Mathematics Assignment Booklet 4A, and follow the directions to do the assignment for Day 3.



Day 4



Calendar Time

Time recommended: 10 minutes

If your student is not registered in the accompanying Thematic program, then begin with Calendar Time activities as usual.

Focus for Today

Time recommended: 45 minutes

- adding and subtracting, using sums and differences to six

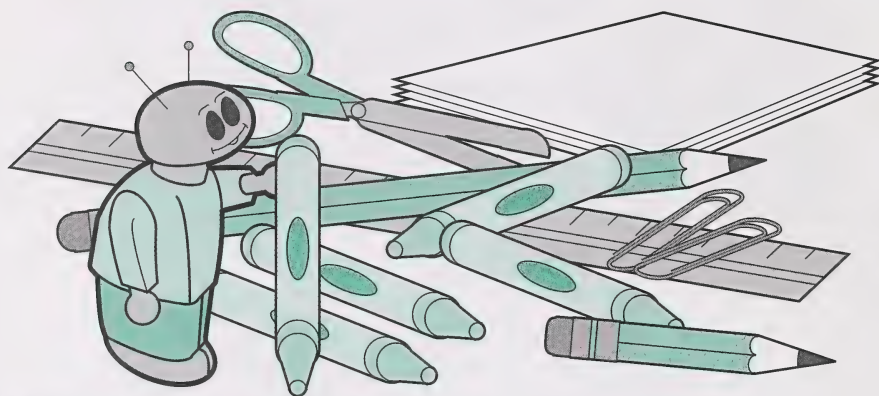


Vocabulary (spoken only)

plus
equals
minus

Materials Required

- box containing required materials from the master list
- library books (optional)



Developing the Concept

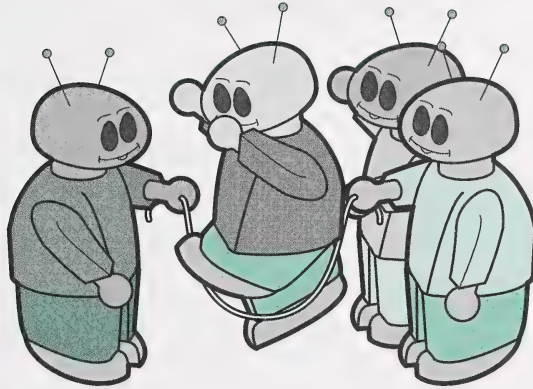
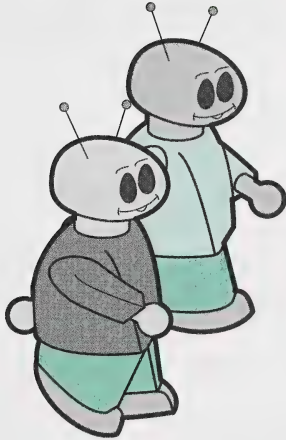
Addition and Subtraction Song

Sing the following verse to the tune of “London Bridge Is Falling Down,” or just chant the verse as a poem.

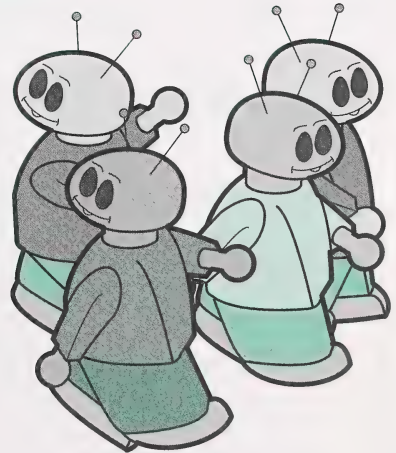


Have the student model each verse with the appropriate number of fingers.

Two plus four equals six,
Equals six, equals six.
Two plus four equals six.
Six, six, six, six.



Six minus two equals four,
Equals four, equals four.
Six minus two equals four.
Four, four, four, four.



Now make up new verses, similar to the previous ones, that will help the student practise adding sums and subtracting differences to six. Substitute words according to what you make up, and have the student continue to model each verse with the appropriate number of fingers.

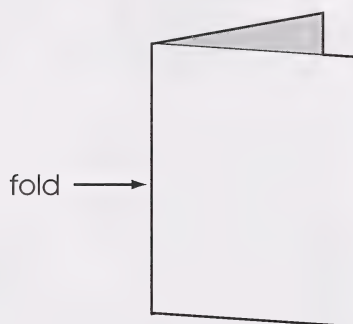
Use other favourite tunes to create more addition and subtraction songs.

Applying the Concept

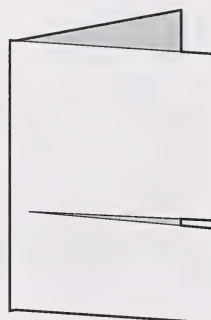
Addition and Subtraction Peek-a-Boo Booklets

Encourage your student to show care in the construction of the booklets, add interesting details, and colour the illustrations.

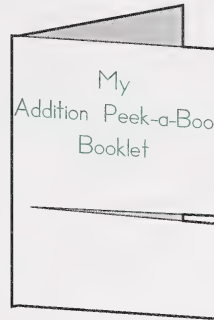
Step 1: Help the student fold a piece of unlined paper in half.



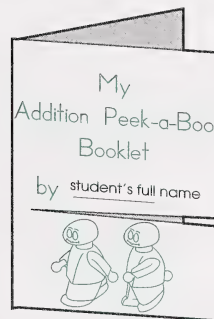
Step 2: Approximately eight centimetres from the bottom edge, cut the top sheet of paper toward the fold, stopping about two centimetres from the fold.



Step 3: This page will be the booklet cover. Ask the student to print the title on the top section.



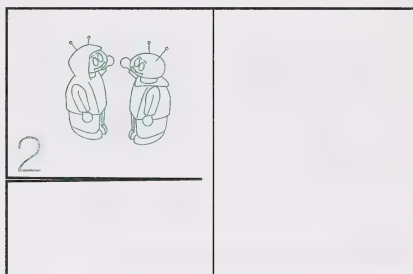
Step 4: Have the word **by** and the student's full name printed below the title. Encourage the student to add a theme-related illustration on the bottom flap of the paper.



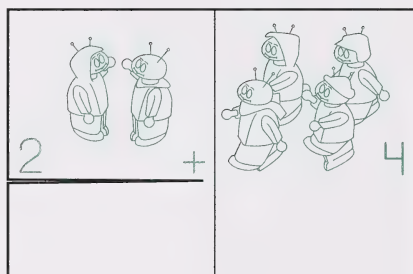
Step 5: Ask the student think of an addition number story using a sum to six, such as the one that follows.

**Two friends were playing in the snow.
Four friends came to join them. How
many friends in total are playing in the
snow?**

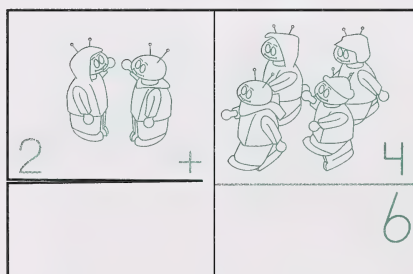
Step 6: Have the student illustrate the first number in the story on the top-left inside page and then print the number below the picture.



Step 7: Ask the student to illustrate the second number on the top-right inside page and print the number below that picture. Then place an addition sign between the two numbers.



Step 8: Draw a straight line from the fold to the outside edge of the page below the illustration of the second number. Under this line, print the sum of the two numbers.



Step 9: Have the student make a second peek-a-boo booklet that shows a subtraction number story.

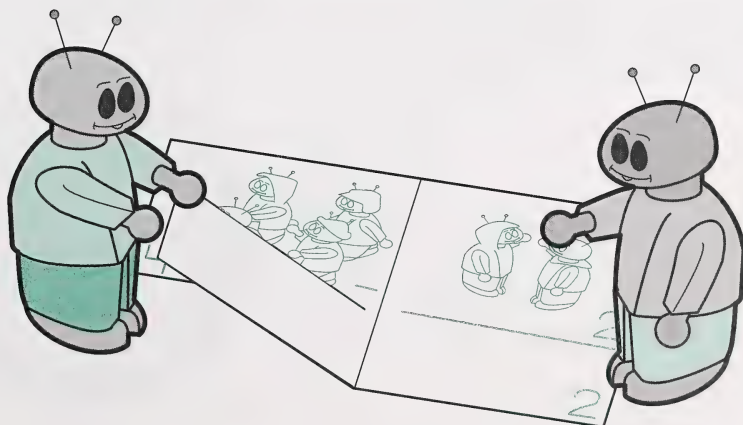
My
Subtraction
Peek-a-Book
Booklet

by student's full name

Step 10: Have the student print the abbreviated form of the module and day numbers, M4D4, on the back of each booklet.

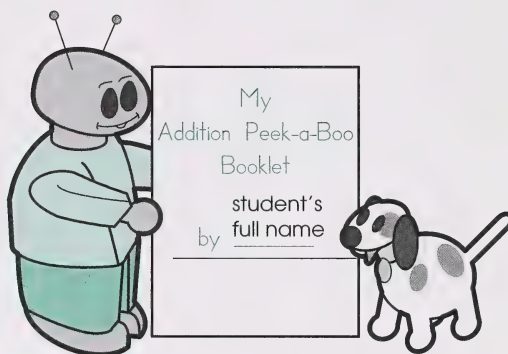
Step 11: Encourage the student to read the addition and subtraction peek-a-boo booklets to family and friends in the following way:

- Read the title, and tell who wrote the booklet.
- Keep the bottom flap covering the sum or difference, and turn to the top inside page.
- Read the first half of the number story from left to right, for example, “Two friends **plus** four friends **equals** . . .”
- Ask if the listener knows the answer.
- Open the flap and reveal the sum or difference.





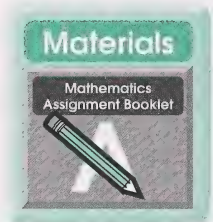
Step 12: Place both booklets in the Student Folder.



Enrichment (optional)

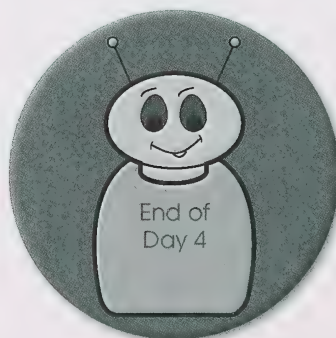
Visit to the Library

If you have not already done so, you could visit your local library to look for books about addition and subtraction. Refer to the list of books under Additional Resources at the beginning of this module.



Turn to Mathematics Assignment Booklet 4A, and follow the directions to do the assignment for Day 4.

Then complete Day 4: Learning Log. Under Student's Thoughts, print a sentence or two telling what the student thinks about this day's mathematics learning, for example, about the ability to represent information on a picture graph.



Day 5



Calendar Time

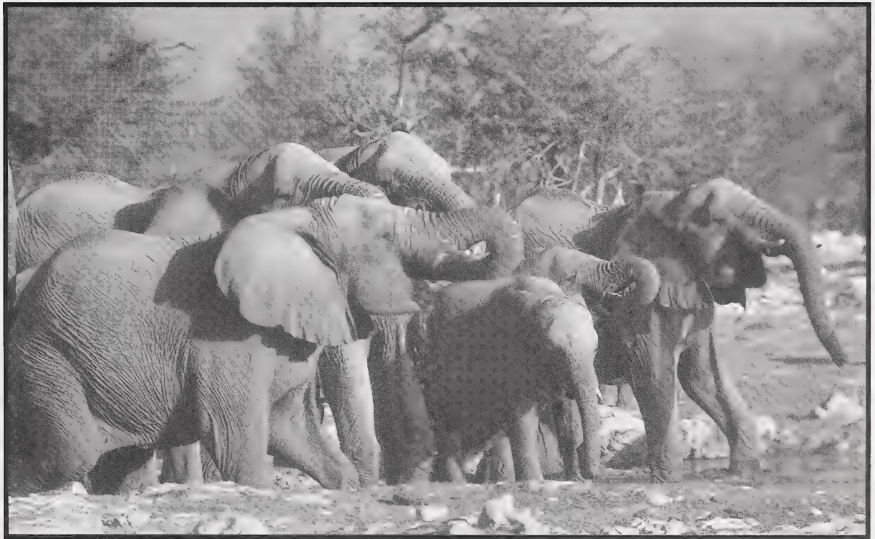
Time recommended: 10 minutes

If your student is not registered in the accompanying Thematic program, then begin with Calendar Time activities as usual.

Focus for Today

Time recommended: 45 minutes

- subtracting, using differences to six



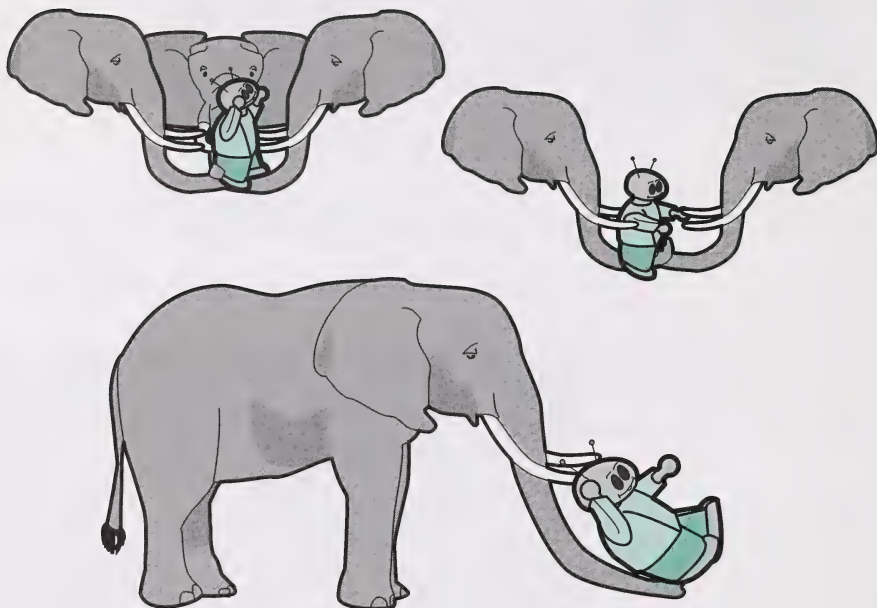
Vocabulary (spoken only)

together
remaining/remainder
backward

take away
subtract
outline
puzzle

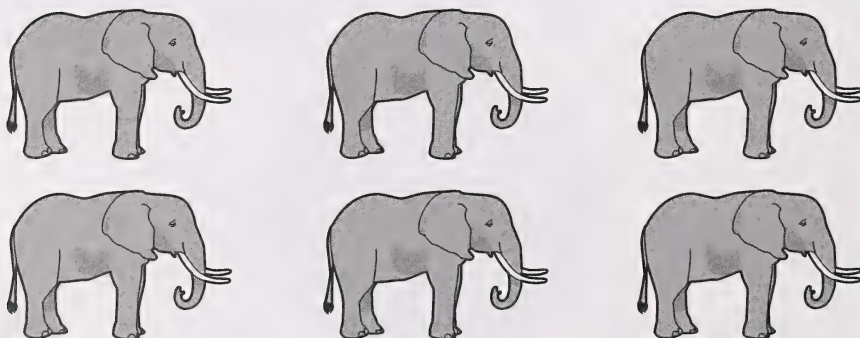
Materials Required

- box containing required materials from the master list
- six toy animals or other counters
- six eggs (optional)
- egg carton (optional)
- utensils and ingredients to make scrambled eggs (optional)



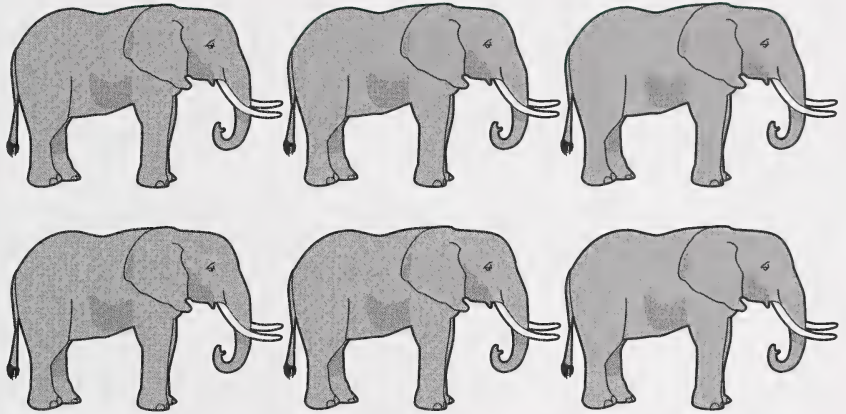
Developing the Concept

Give your student six toy animals or other counters. Use the counters to model number stories such as the following.

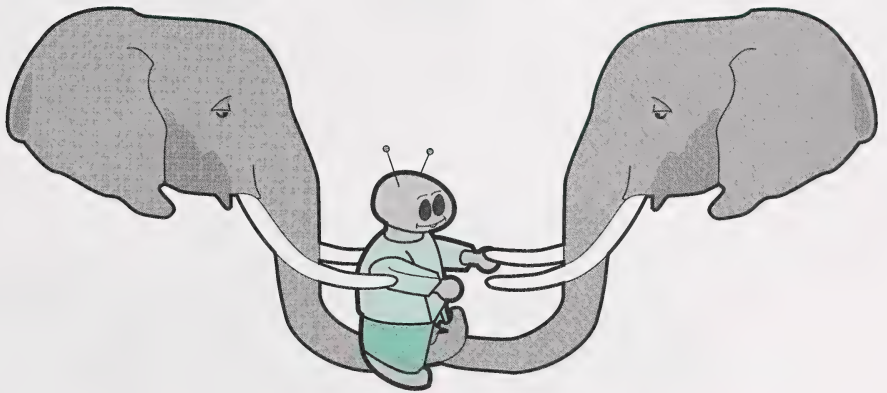




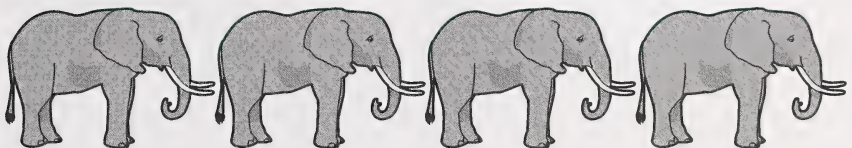
Here are 6 elephants.



2 elephants put their trunks **together** to make a swing.



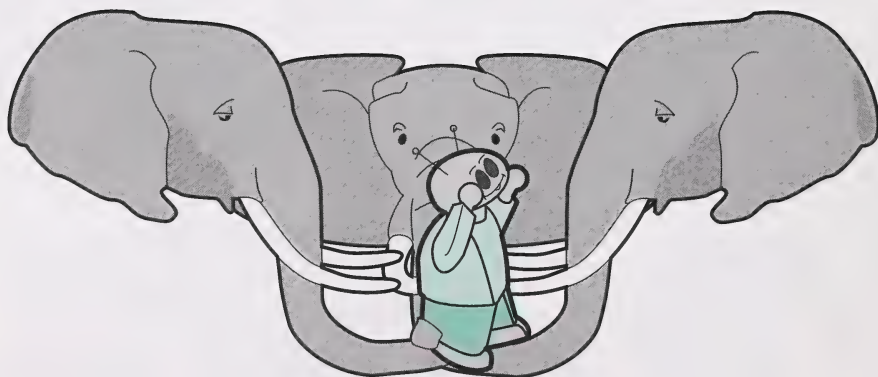
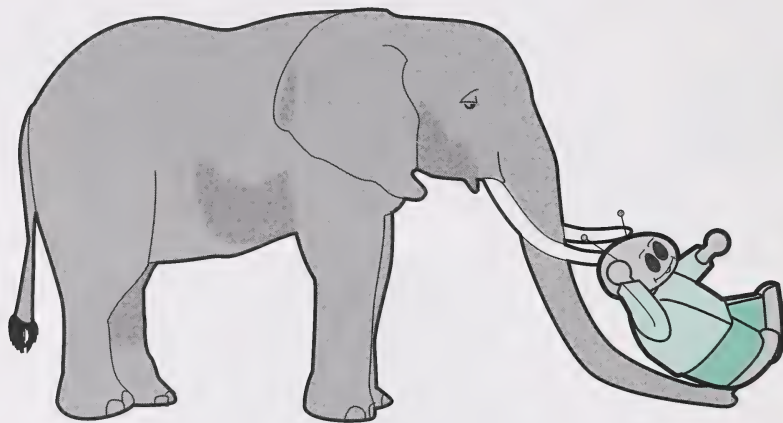
How many elephants are watching the 2 elephants swinging? (4)



The 4 **remaining** elephants want to play, too, but they don't know what to do.

Help them think of some ways to play.

(One elephant could use its trunk for a slide, and the three **remaining** elephants could join their trunks **together** to make monkey bars.)



Applying the Concept



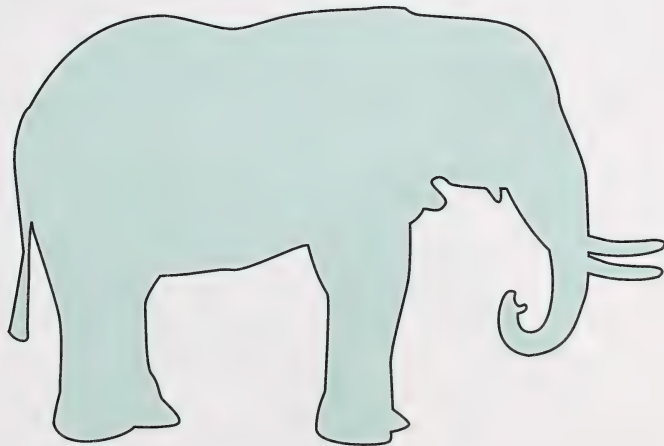
Observe how your student records the subtraction stories in the following booklet activity.

- Does the student count **backward** by ones to find the **remainder**?
- Does the student understand that adding the take-away number to the remainder results in the original number?
- Does the student use the terms **take away** or **subtract** to describe the action?

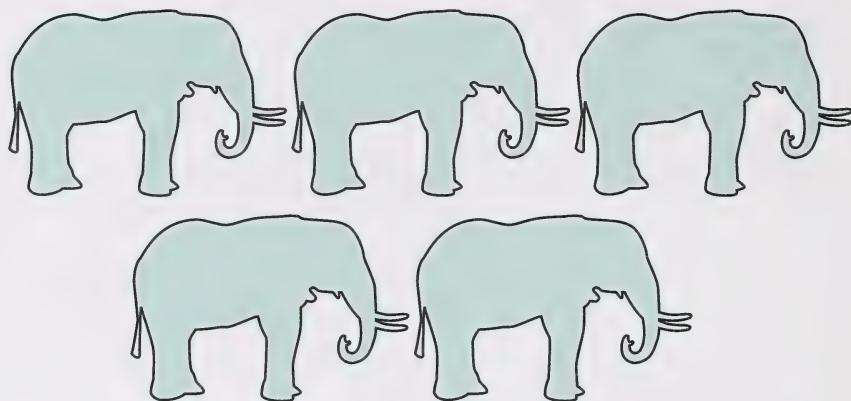
Comment on your observations later in Day 5: Learning Log.

Animals at Play Booklet

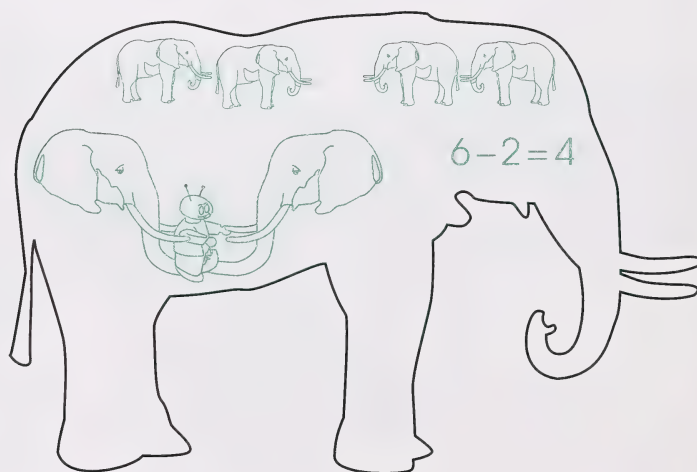
Step 1: Have your student choose a favourite animal. Help the student draw a large **outline** of this animal on light cardboard or heavy-weight paper. Cut around the animal outline.



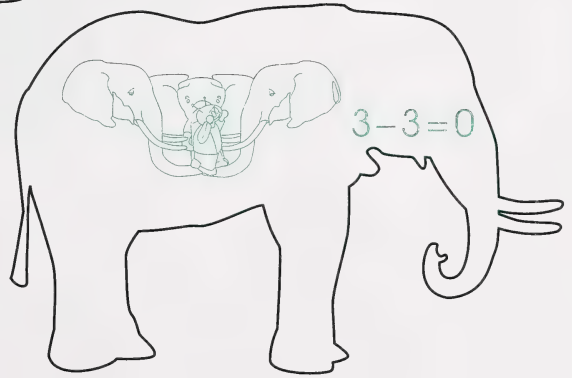
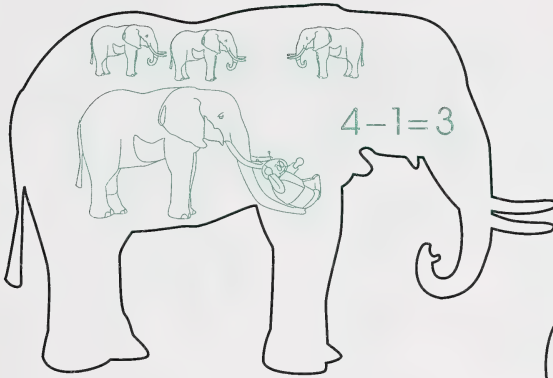
Step 2: Using the outline as a pattern, trace five identical animal shapes on construction paper. Cut out these five animal-shaped pages. Some will be the inside pages of the booklet, and two will be the front and back covers.



Step 3: On one animal-shaped page, have the student draw six matching animals, some of which are involved in a play activity, and then print the corresponding subtraction number sentence. For example, the illustration below shows two elephants with trunks joined to make a swing and four elephants watching.

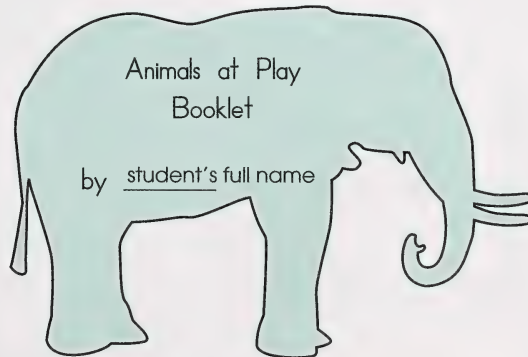


Step 4: Help your student create two or three number stories in total. Begin each number story with the number of animals that were not involved in the play activity from the previous story.

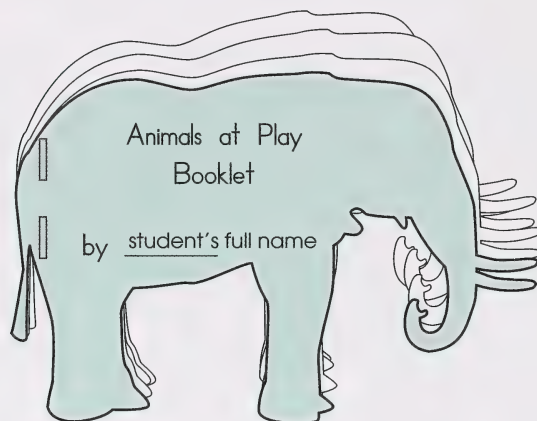


Remember to have the student print a corresponding number sentence for each subtraction number story.

Step 5: Have the student use one of the animal-shaped sheets to make a cover page similar to the one shown below.

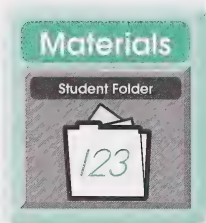
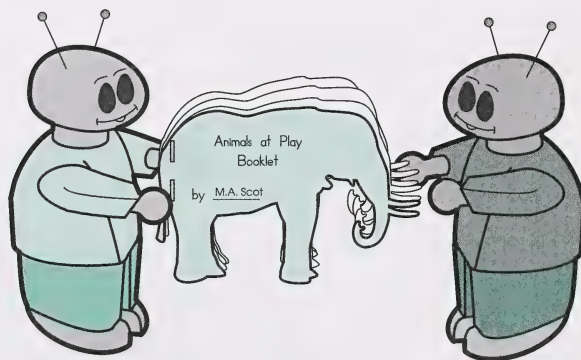


Step 6: Place the cover page on top of the two or three number-story pages, and add the back page. Staple all the pages together on the left side to make a booklet.



Have the student print the abbreviated form of the module and day numbers, M4D5, on the back of the booklet.

Step 7: Encourage the student to read the number stories to family and friends.

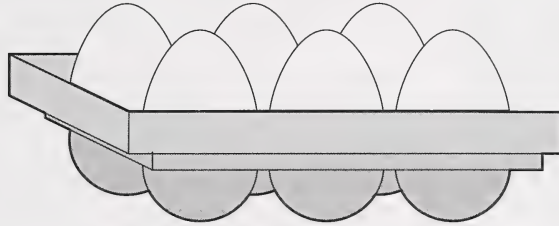


Step 8: Place the booklet in the Student Folder.

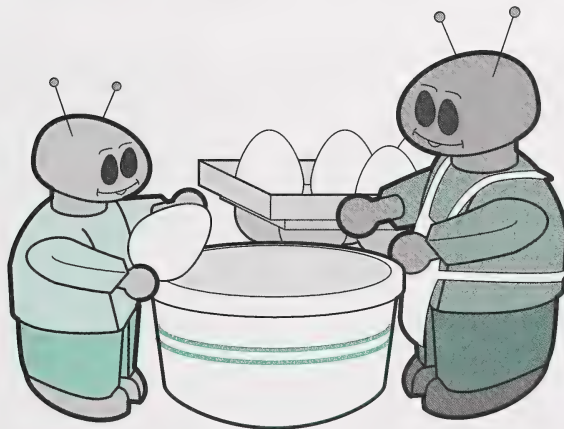
Enrichment (optional)

Egg Subtraction

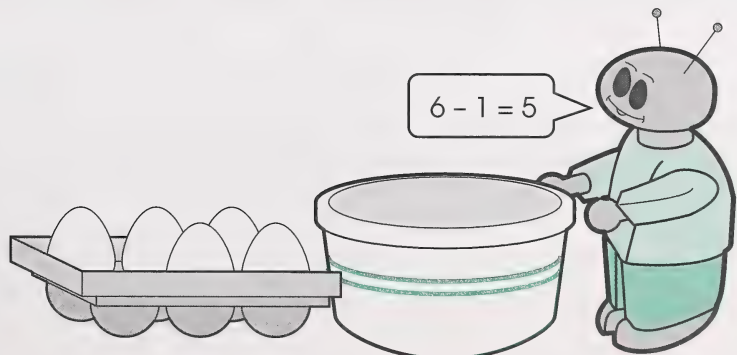
Step 1: Place six eggs in an egg carton that has been cut in half.



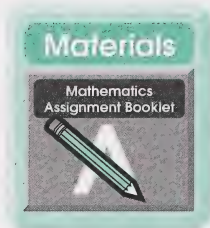
Step 2: Help the student make scrambled eggs or omelettes by cracking some of the eggs.



Each time your student cracks an egg, have the child say the corresponding subtraction number sentence. For example, if you have six eggs and you crack one, there are five eggs left. ($6 - 1 = 5$)

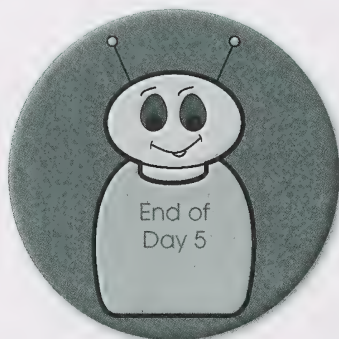


Step 3: Have the student repeat this activity on other occasions when making other recipes.



Turn to Mathematics Assignment Booklet 4A, and follow the directions to do the assignment for Day 5.

Then complete Day 5: Learning Log. Under Student's Thoughts, print a sentence or two telling what the student thinks about this day's mathematics learning. For example, was it easy to make the matching number sentences for the number stories? Why was it easy or hard?



Day 6



Calendar Time

Time recommended: 10 minutes

Proceed with Calendar Time activities as usual.

Focus for Today

Time recommended: 45 minutes

- adding, using sums to **seven**



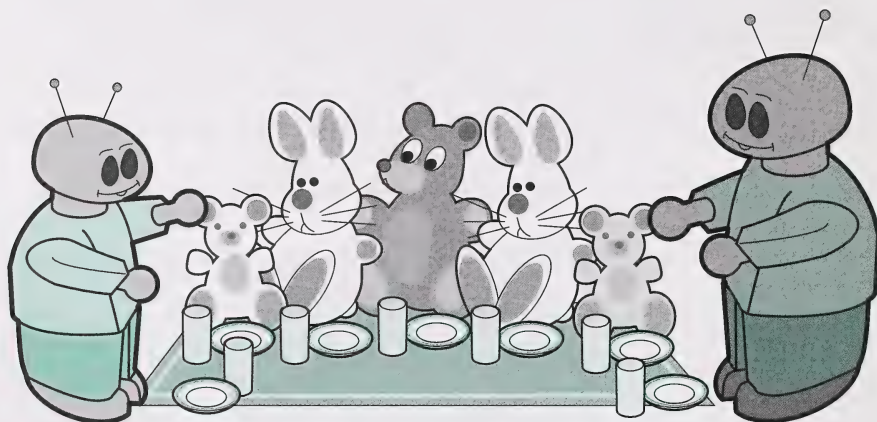
Vocabulary (spoken only)

Students at this level are not required to read, spell, or write these words, with the exception of the number words from zero to ten. Another number word appears on the list below.

seven
several
omit

Materials Required

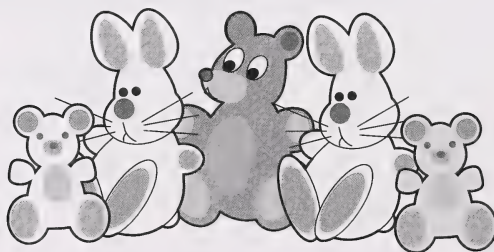
- box containing required materials from the master list
- items for picnic (See a list in Developing the Concept.)
- five stuffed animals
- seven hard-cooked eggs or seven counters (optional)
- egg carton (optional)
- stove timer or suitable substitute (optional)
- collection of counters (optional)



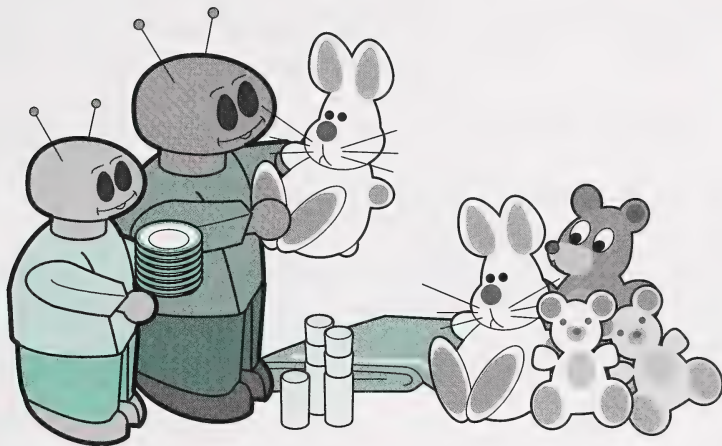
Developing the Concept

Help the student gather **several** items for a picnic, such as grapes, raisins, cheese slices, crackers, seven plates, seven spoons, seven cups for juice or juice boxes, and a blanket. Substitute as necessary.

Ask the student to invite five stuffed animal friends. You will be talking about sums to seven at your picnic.



While gathering the picnic items, talk about the number of friends that will be there and the number of each type of item that you are collecting.



Applying the Concept

Place two plates on the blanket, and say the following.

We have invited some friends to our picnic.
These 2 plates are for you and me.



If 5 friends come, how many more plates will we need? (5)

Lay out 5 more plates, and say how many plates there are in total. (7)

What number sentence shows what you have done? ($2+5=7$)



Help the student as necessary. Then have the student print the number sentence on a blank recipe card. Continue the script.

If there were 3 of us on the blanket and 4 friends joined us, how many would there be in total? (7)

Have the student act out this situation with the stuffed animals. Then ask the student to say the number sentence and print it on a recipe card.

Have the student continue to act out situations and print number sentences on cards until you have a set with the following number sentences.

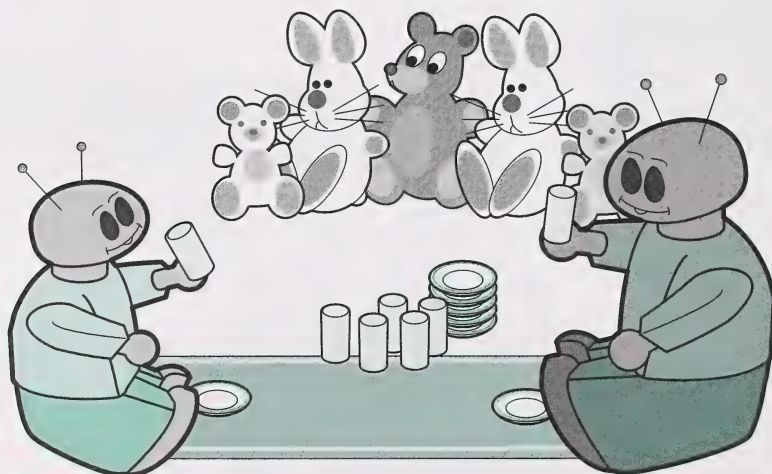
$$3 + 4 = 7 \quad 2 + 5 = 7$$

$$4 + 3 = 7 \quad 5 + 2 = 7$$

$$1 + 6 = 7 \quad 0 + 7 = 7$$

$$6 + 1 = 7 \quad 7 + 0 = 7$$

Keep these sums-to-seven cards for future use. Then enjoy your picnic snacks.

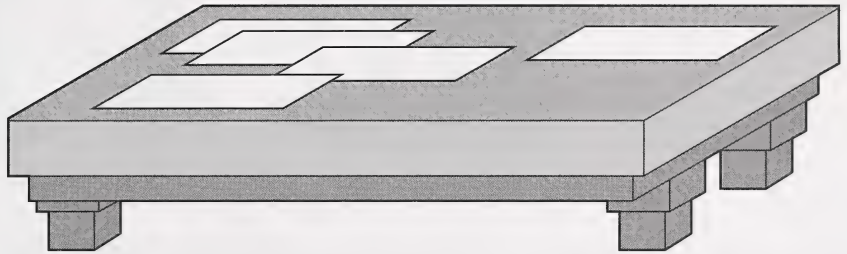


Enrichment (optional)

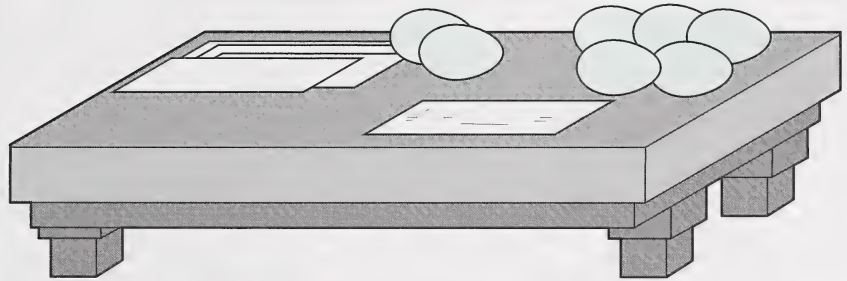
1. Match the Cards

Gather your sums-to-seven cards, **seven** hard-cooked eggs or other counters, and an egg carton.

Step 1: Place the sums-to-seven cards face down in a pile.



Step 2: Have the student choose a card and arrange the eggs or counters in two sets to show the number sentence on the card. The student could arrange the counters in an egg carton.



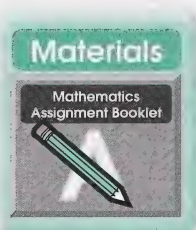
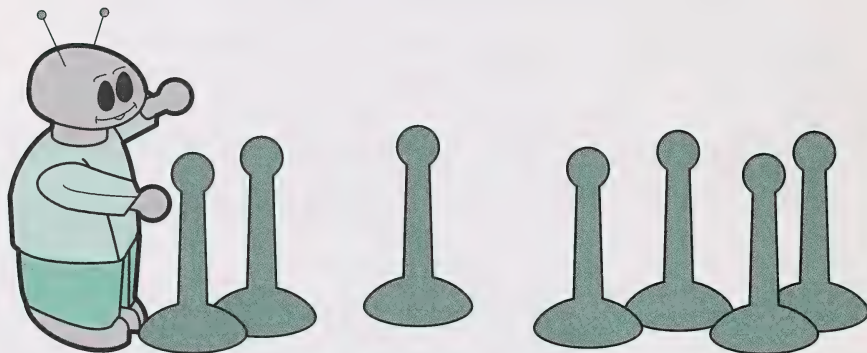
Step 3: Take turns choosing cards and arranging the eggs or counters to show each number sentence until all the cards have been acted out.

2. Beat the Clock

Step 1: On a piece of paper or chalkboard, print **several** addition number sentences with sums to seven. **Omit** one number from each sentence.

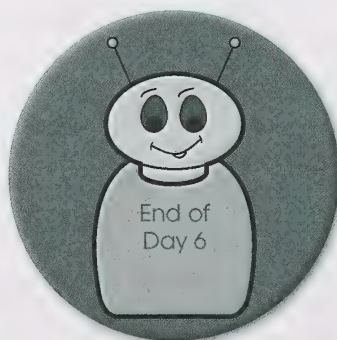
$$\begin{array}{l} 1 + \underline{\quad} = 7 \\ 3 + \underline{\quad} = 7 \\ \underline{\quad} + 3 = 7 \end{array}$$

Step 2: Set a stove timer for five minutes, and see how many missing numbers the student can fill in. Give the student counters to help find the missing numbers.



Turn to Mathematics Assignment Booklet 4A, and follow the directions to do the assignment for Day 6.

Then complete Day 6: Learning Log. Under Student's Thoughts, print a sentence or two telling what the student thinks about this day's mathematics learning, for example, about the ability to add, using sums to seven.



Day 7



Calendar Time

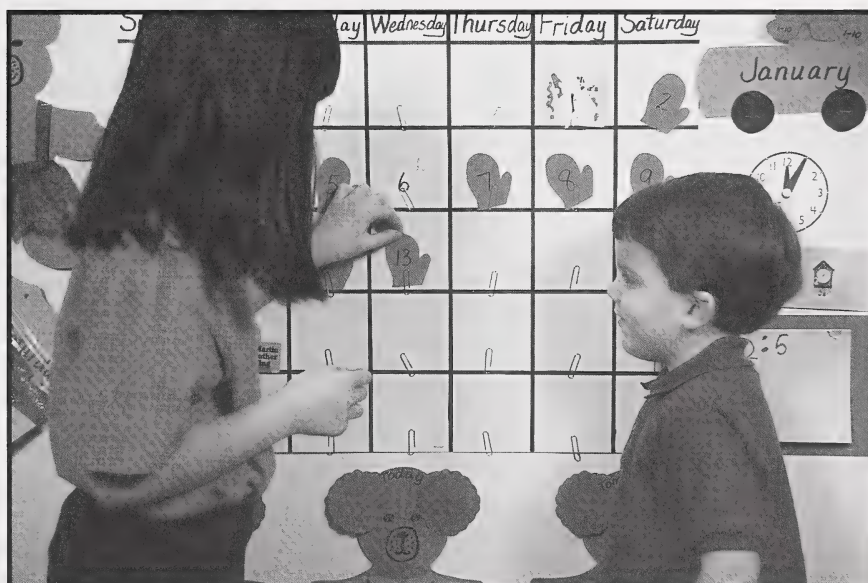
Time recommended: 10 minutes

Proceed with Calendar Time activities as usual.

Focus for Today

Time recommended: 45 minutes

- subtracting, using numbers to seven



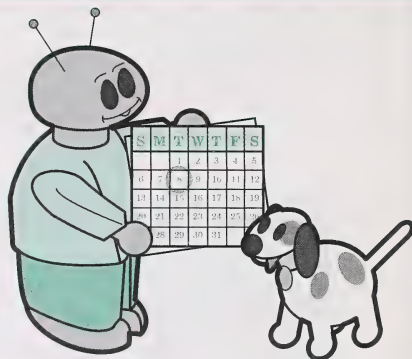
Vocabulary (spoken only)

week
calendar
Sunday
Monday
Tuesday

Wednesday
Thursday
Friday
Saturday

Materials Required

- box containing required materials from the master list
- Module 4, Day 7 calendar page from the Calendar Package
- seven pennies
- stamps and inked stamp pad (optional)



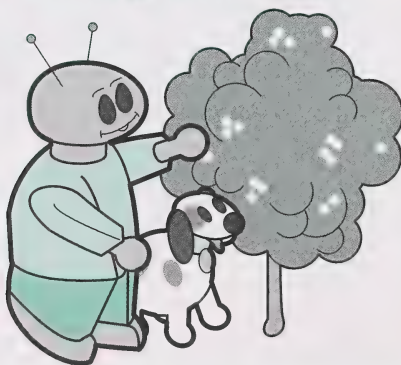
Developing the Concept

Sing or say the following song twice with your student.

===== 'Round the Mulberry Bush =====

Here we go 'round the mulberry bush,
the mulberry bush, the mulberry bush.
Here we go 'round the mulberry bush,
so early **Sunday** morning.

This is the way we go for a walk,
go for a walk, go for a walk.
This is the way we go for a walk,
so early **Sunday** morning.



Have the student repeat the song, substituting a different day of the **week** and activity each time. For example, if **Monday** is the designated day, the student could say or sing, “This is the way we do our school work so early Monday morning.”

Encourage your student to create six unique verses.

Applying the Concept

Remove the calendar page labelled Module 4, Day 7 from your Calendar Package. Focus the student’s attention on this page, and instruct as follows.



There are 7 days in one **week**.

The names of the 7 days of the week are at the **top** of the **calendar**.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

The days of the week are read from **left** to **right** on the calendar.

Let’s say the names of the 7 days of the week.

Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday.

Move your finger across the **first** week on the calendar. Help the student as necessary.

Day 7 • Mathematics

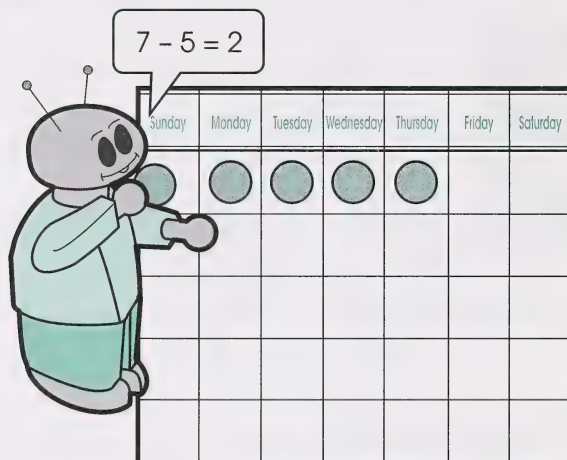
How many days are in one week? (7)

Use pennies to cover up 3 days of the week.

How many days are left? (4)

Print the number sentence that shows what you did. Print it in one of the boxes in the first week. (Student should print $7 - 3 = 4$.)

Now use pennies to cover up 5 calendar days.



A week has 7 days, and you covered up 5 days. How many days are left? (2)

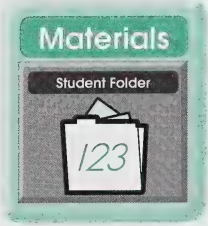
Print the number sentence $7 - 5 = 2$ in another calendar box.

Have the student continue to cover up days and print number sentences in the calendar boxes until the following have been printed:

$$7 - 6 = 1 \quad 7 - 4 = 3 \quad 7 - 7 = 0$$

$$7 - 2 = 5 \quad 7 - 1 = 6 \quad 7 - 0 = 7$$

Have the student's full name and the abbreviated form of the module and day numbers, M4D7, printed on the back of the calendar page.

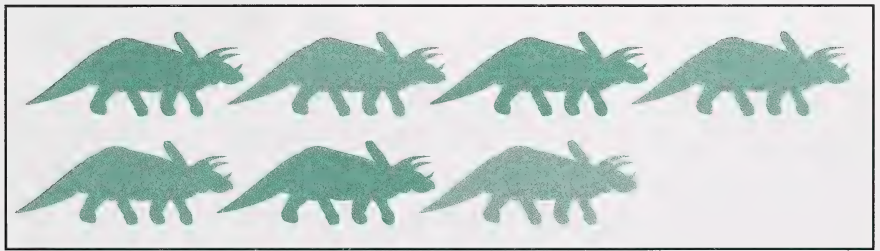


Display this page at the student's eye level until Day 9 when it will be added to the items in the Student Folder.

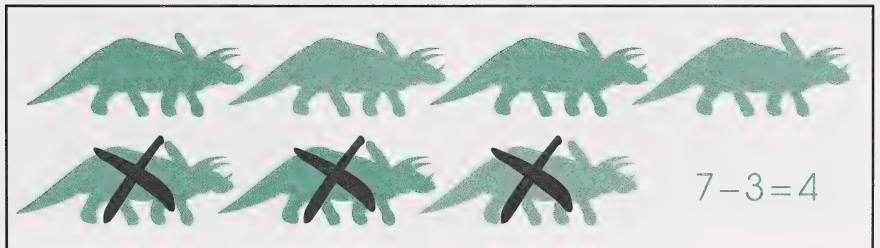
Enrichment (optional)

Stamp Sets

Step 1: Cut ten strips of unlined paper, and gather some stamps and an ink pad. Stamp a starting set of seven stamps on one strip of paper.



Step 2: Ask the student to cross off some of the stamp shapes and record the corresponding subtraction sentence.

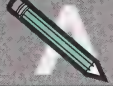


Step 3: Take turns stamping a starting set to seven, crossing off a chosen number, and printing the corresponding subtraction sentence, until the student has practised a variety of subtraction sentences that use numbers to seven.

Day 7 • Mathematics

Materials

Mathematics
Assignment Booklet



Turn to Mathematics Assignment Booklet 4A, and follow the directions to do the assignment for Day 7.



Day 8



Calendar Time

Time recommended: 10 minutes

Begin with Calendar Time activities as usual.

Focus for Today

Time recommended: 45 minutes

- adding, using sums to **eight**
- counting by twos to **ten**



Vocabulary (spoken only)

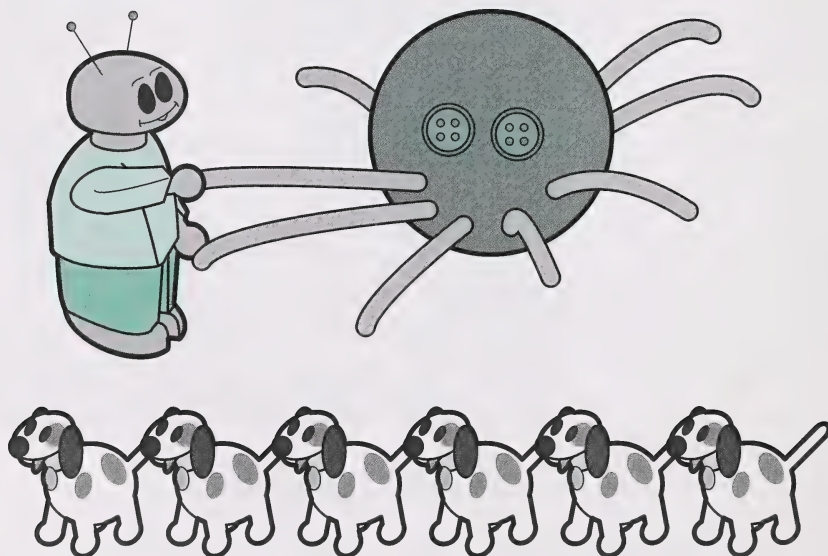
More number words for the student appear on the list below. Other than these, students at this level are not required to read, spell, or write these words.

eight
counting by twos
ten

add
skip counting

Materials Required

- box containing required materials from the master list
- four craft pipe cleaners or four lengths of yarn or string, each about 20 centimetres long
- one foam craft ball
- two small buttons (optional)
- ten counters
- ten pennies
- ten multi-coloured buttons or bingo chips (optional)
- approximately 50 balloons in various colours, or other coloured items, such as buttons, candies, or macaroni (optional)
- ten small, clear plastic bags (optional)



Developing the Concept

Today, the student will work with sums to eight and **counting by twos**.

Activities

Teaching tip



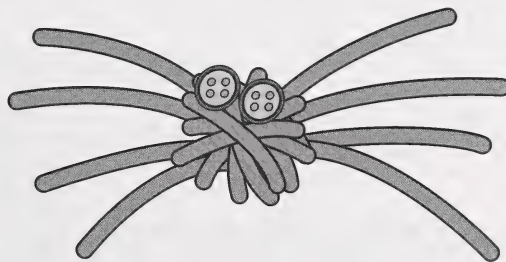
Observe how your student writes number sentences and solves problems while adding sums to eight. Is the child able to do the following?

- count all objects to find the sum
- count forward from one group to find the sum
- use the term **add**

Mister 8

First, help your student make an eight-legged figure that resembles an octopus or a spider. To make an octopus, cut four craft pipe cleaners in half and insert the eight pieces along the sides of a foam craft ball to resemble legs.

To make a spider, use four lengths of yarn or string, each about 20 centimetres long. Hold all four lengths at once, and tie them into one large knot in the centre, leaving eight ends.



You could add small buttons for eyes to either figure. Introduce the finished character to your student as Mister 8. Then guide with the following script.



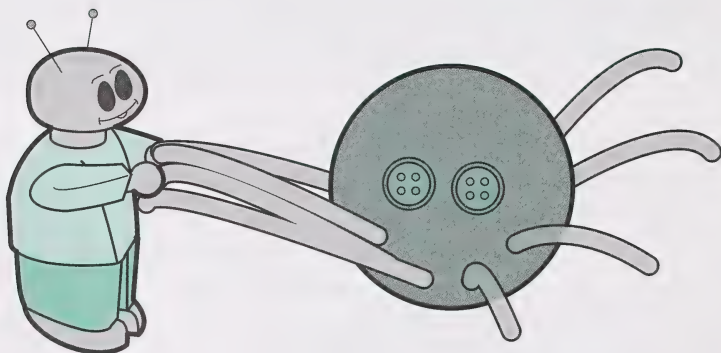
Count Mister 8's legs. (1, 2 . . . 8)

Hold 4 of Mister 8's legs in your hand.

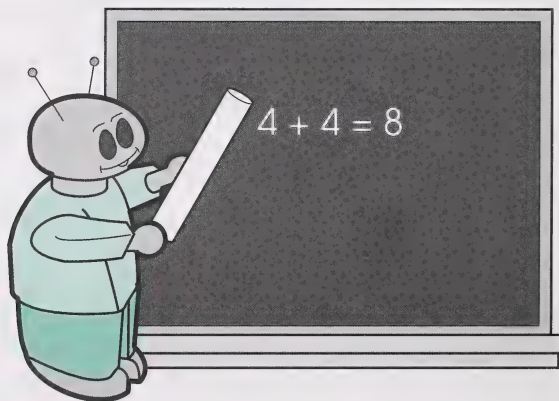
How many legs are left? (4)

A set of 4 legs and another set of 4 legs makes 8 legs in total.

What number sentence shows what you did?
($4 + 4 = 8$)



Have the student print the number sentence on a chalkboard or piece of paper.



Continue as follows.

Use Mister 8's legs to help make other number sentences that add up to a sum of eight.

For each number sentence, have the student hold a different number of Mister 8's legs and construct a number sentence to match the situation. The following number sentences are possible.

$$7 + 1 = 8$$

$$6 + 2 = 8$$

$$5 + 3 = 8$$

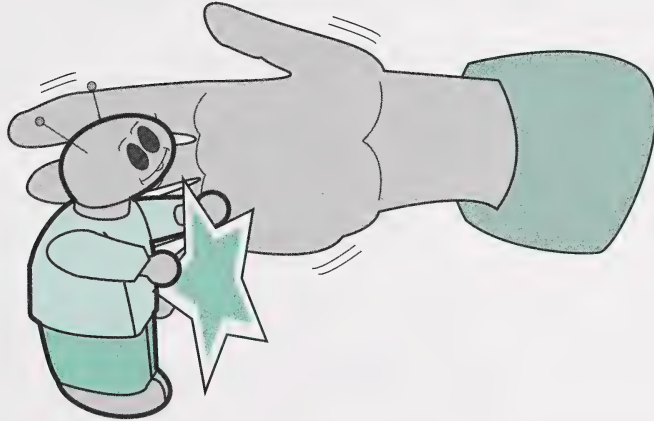
$$3 + 5 = 8$$

$$2 + 6 = 8$$

$$1 + 7 = 8$$

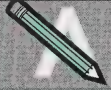
$$0 + 8 = 8$$

$$8 + 0 = 8$$



Materials

Mathematics Assignment Booklet



Turn to Mathematics Assignment Booklet 4A, and follow the directions to do Day 8: Assignment 1.

Applying the Concept

In this activity, instead of counting by ones, your student will be **skip counting** by twos.

Activities

Teaching Tip



Skip counting, combined with counting forward and counting back, provides excellent preparation for counting change. Skip counting also develops readiness for multiplication and division.

Begin the skip-counting activity by asking the student to select ten counters. Sort them into sets of two.



Use the following script.

Today, you will **count by twos** to the number 10.

Listen while I count by twos to 10.

2, 4, 6, 8, 10 (Move sets of two counters while you speak.)

Let's count together.

2, 4, 6, 8, 10 (Move the counters again.)

Put your 2 thumbs together, and say 2.

Keep your thumbs together, put your 2 pointer fingers together, and say 4.

Put your 2 middle fingers together, and say 6.

Put your 2 ring fingers together, and say 8.

Last, put your 2 baby fingers together, and say 10.

Repeat this activity and the finger actions twice more.

Then place ten pennies in front of the student, and continue the script.

Count the pennies by twos. (2, 4, 6, 8, 10)

How many sets did you make from these 10 pennies? (5)

The number sentence for this is $2+2+2+2+2=10$.

Subtract 2 pennies from the 10 pennies.

Now, how many pennies are there? (8)

Make sets of 2 with the remaining pennies.

How many sets of 2 are in 8? (4)

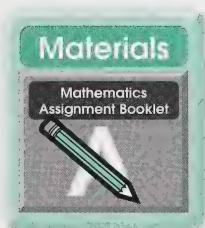
Count by twos to 8, and move 2 pennies at a time while you count.

Take 2 more pennies away.

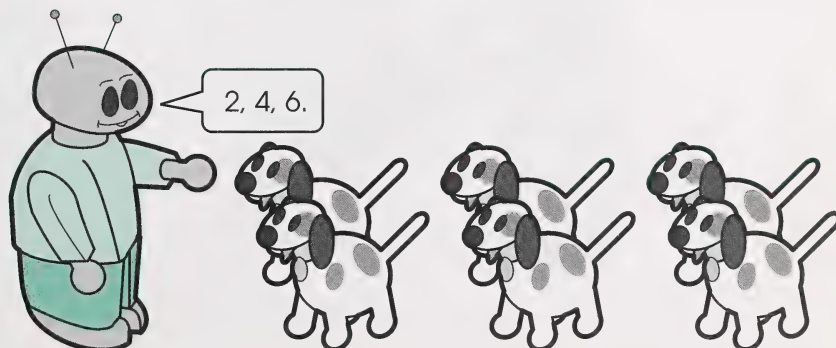
How many pennies are left? (6)

Count by twos to 6, and move 2 pennies at a time while you count.

How many sets of 2 are in 6? (3)



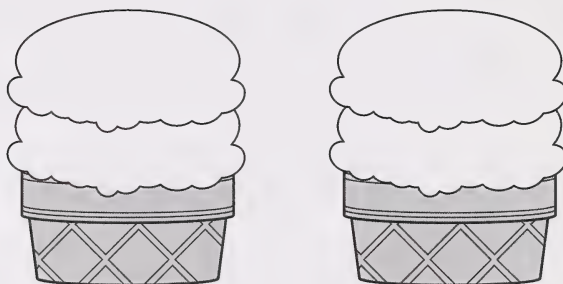
Turn to Mathematics Assignment Booklet 4A, and follow the directions to do Day 8: Assignment 2.



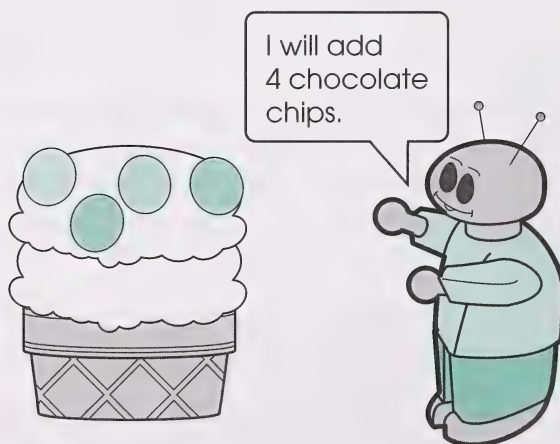
Enrichment (optional)

1. Double Scoop

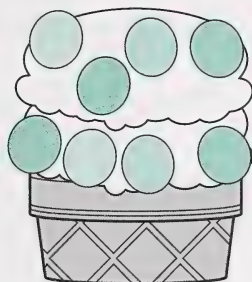
Step 1: Collect ten multi-coloured buttons or bingo chips. Using various colours of construction paper, help the student make two large double-scooped ice cream cones, similar to the examples below.



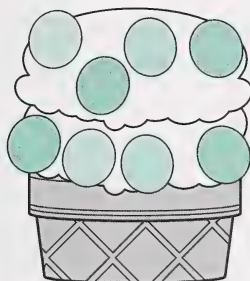
Step 2: Ask the student to choose one of the cones and name a specialty item to add to the top scoop, such as chocolate chips, nuts, sprinkles, candies, or cookie pieces. Have the student use the buttons or bingo chips to show how many items are on the top scoop.



Step 3: Have the student consider what specialty item to add to the bottom scoop and use counters to show the number of items in this position.

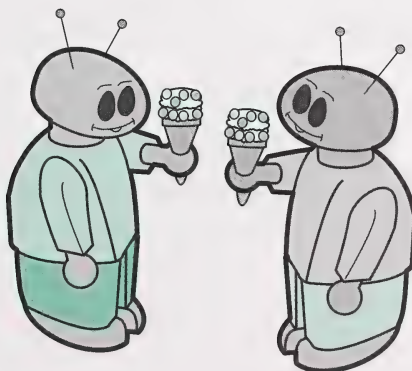


Step 4: Have the student add the numbers of specialty items in the top and bottom scoops.



$$4 + 4 = 8$$

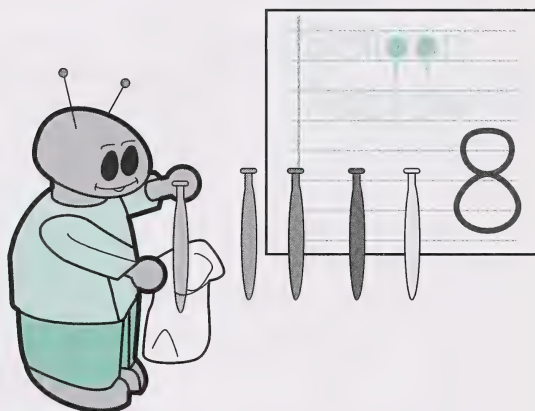
Step 5: Take turns making gourmet kinds of ice cream and adding the numbers of specialty items in both scoops. Check each other's addition.



2. Balloon Factory

Supervise this activity closely so that the student or other children are not left unattended with balloons or other small items.

Step 1: Collect approximately 50 balloons or other small items in various colours, such as buttons, candies, or macaroni. Also gather ten small, clear plastic bags, some construction paper, and a black felt marker. Have the student make a construction-paper sign similar to the one shown below.



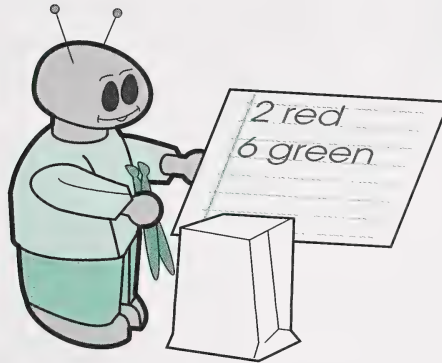
Step 2: Help the student make balloon orders on quartered pieces of loose-leaf paper. Each order should add up to a total of eight balloons. For example, on one order form, the student could print two red balloons and six green balloons. Make ten order forms.

2 red
6 green

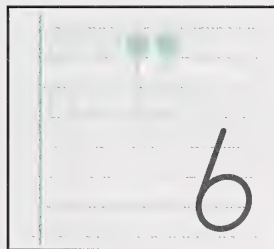
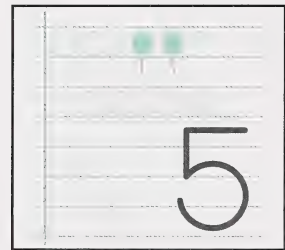
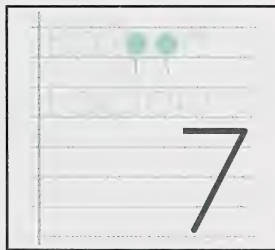
4 purple
4 pink

3 orange
5 yellow

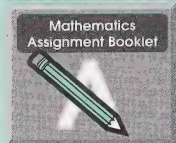
Step 3: Take turns filling the orders and checking each other's orders for correctness. Place each order in a plastic bag. Whenever possible, encourage the student to **count by twos**.



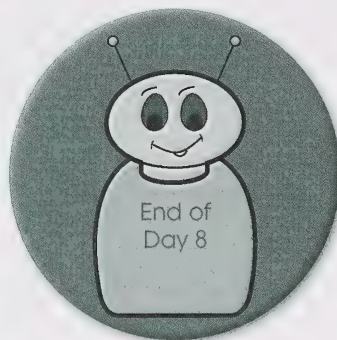
Step 4: Instead of having the total number of balloons add up to eight, choose other sums. For each new total, make a new sign.



Materials



Complete Day 8: Learning Log. Under Student's Thoughts, print a sentence or two telling what the student thinks about this day's mathematics learning, for example, about the ability to count by twos to ten.



Day 9



Calendar Time

Time recommended: 10 minutes

Begin with Calendar Time activities as usual.

Focus for Today

Time recommended: 45 minutes

- adding, using sums to eight
- finding the missing number in a number sentence

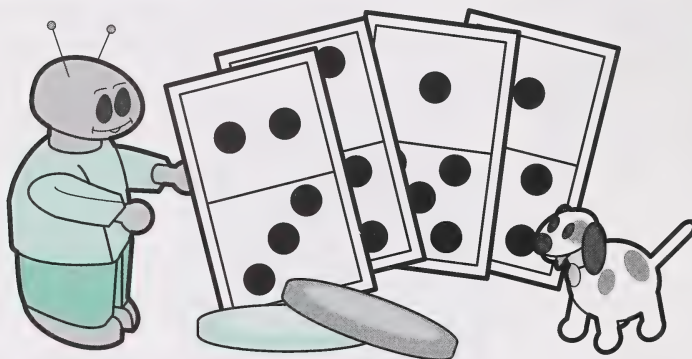


Vocabulary (spoken only)

detective
solves
count forward

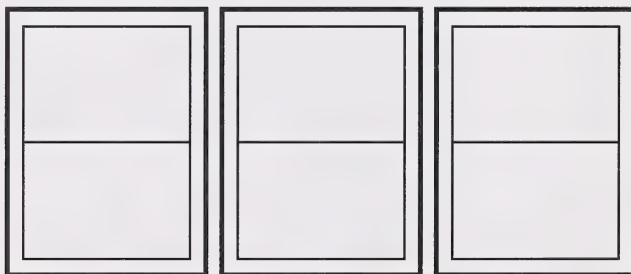
Materials Required

- box containing required materials from the master list
- collection of bingo chips or other round counters in two different colours.

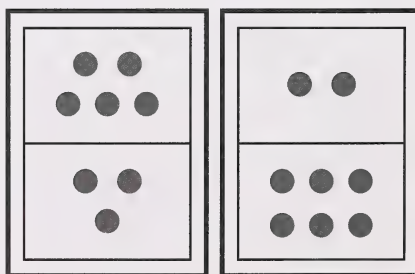


Developing the Concept

Help the student make ten domino mats similar to those shown below.

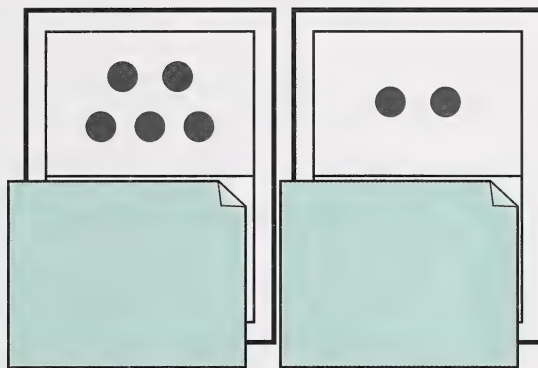


Have the student place the round counters on the mats to show different number combinations for eight.

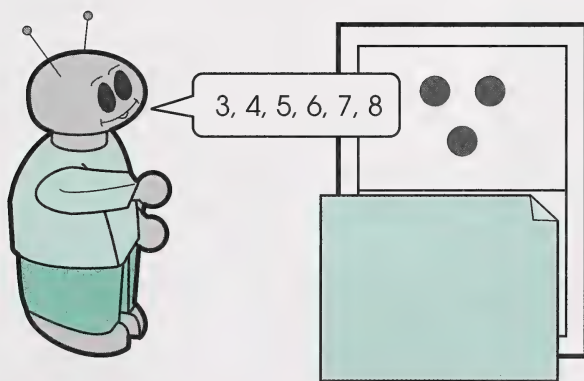


Applying the Concept

Cover one half of each domino mat with paper as shown below.



Ask the student to be a **detective** and find the missing number by **counting forward** from the visible number to the number eight.



You can be a **detective**.

A **detective** is someone who **solves** mysteries.

The word **solves** means to find the answer.

You can **solve** the mystery of how many dots are hidden **under** each piece of paper.

One way you can **solve** each mystery is to **count forward** from the dots that you see.

Take turns solving the mysteries until all ten of them have been solved.

Materials

Mathematics
Assignment Booklet



Turn to Mathematics Assignment Booklet 4A, and follow the directions to Day 9: Assignment 1.

Next, follow the directions to do Day 9: Assignment 2.

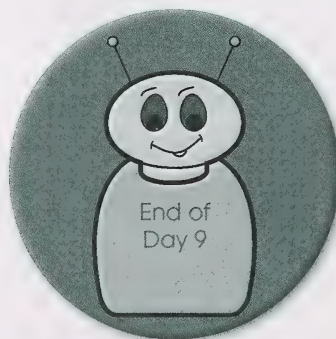
Then complete Day 9: Learning Log 2. Under Student's Thoughts, print a sentence or two telling what the student thinks about this day's mathematics learning, for example, about the ability to find the missing number in a number sentence.

Materials

Mathematics
Assignment Booklet



At the end of Mathematics Assignment Booklet 4A, follow the directions to complete Day 9, Student Folder Items. Take the required items from your Student Folder. Submit these items to your student's teacher for marking at the time the teacher has requested them.



Day 10



Calendar Time

Time recommended: 10 minutes

If your student is not registered in the accompanying Thematic program, refer to the Calendar Package for further information. Then proceed with Calendar Time activities as usual.

Focus for Today

Time recommended: 45 minutes

- adding and subtracting, using sums and differences to eight
- recognizing and using the relationship between addition and subtraction to solve problems



Vocabulary (spoken only)

direct opposite
connection

relationship
pair

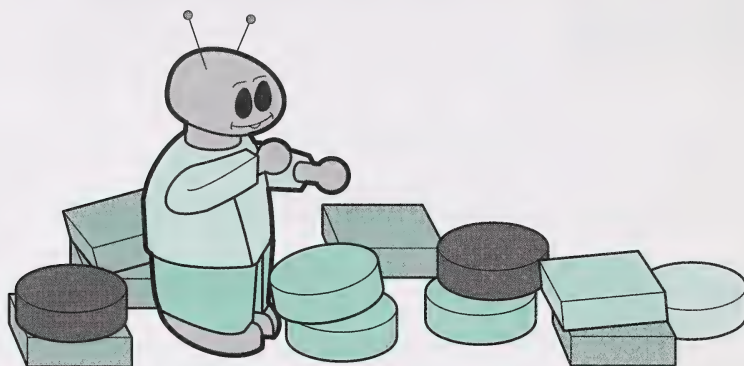
Materials

Home Instructor's Manual



Materials Required

- materials on the master list of required materials (See the Home Instructor's Manual.)
- collections of counters
- two decks of playing cards or suitable substitute (See optional Enrichment activities to get an idea for a substitute.)



Developing the Concept

Activities

Teaching Tip:



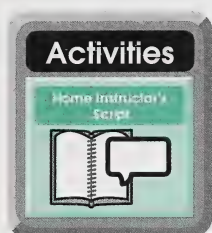
Observe how your student finds differences. Does the student do the following:

- visually guesses the difference
- lines up objects one to one
- counts forward or backward to find the difference
- correctly uses the terms **minus**, **difference**, and **subtract**
- recognizes and uses the **connection** between subtraction and addition to solve problems

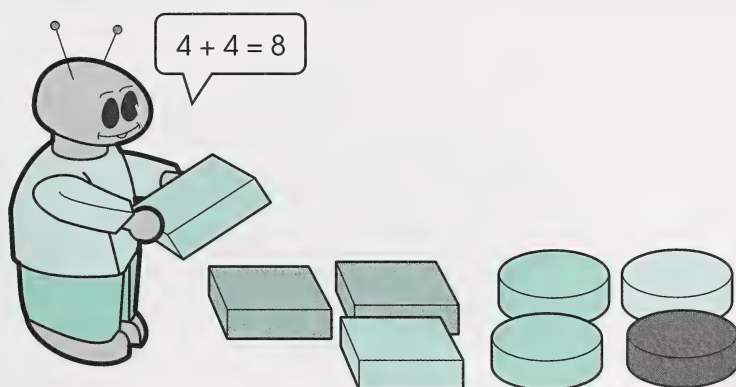
Comment on your observations later in Day 10: Learning Log.

Today, your student will work with subtraction facts to eight and see that subtraction is the **direct opposite** operation of addition.

Have the student get a collection of counters. Instruct as follows.



Use 2 kinds of counters to show adding numbers up to 8. (Help the student show at least two addition operations with sums of eight.)



Then print your number sentences on paper.

Leave a space **below** each addition sentence for a subtraction sentence that uses the same numbers.

$$3 + 5 = 8$$

$$5 + 3 = 8$$

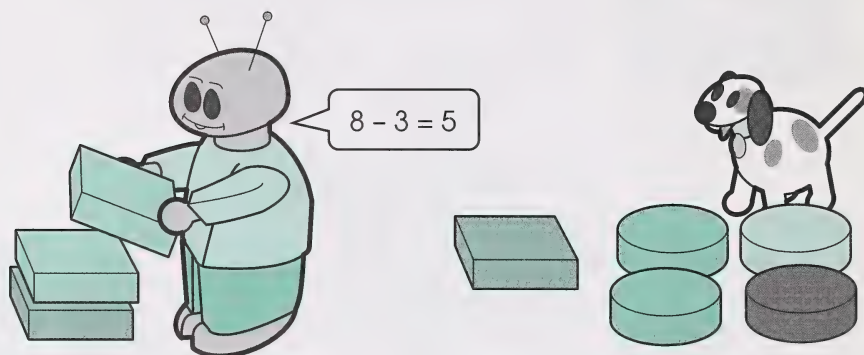
$$1 + 7 = 8$$

$$7 + 1 = 8$$

Choose one of the addition sentences, such as five plus three, and guide the student as follows.

If you have 8 counters and you take away 3 of them, how many counters will be left? (5)

How do you know? (If necessary, guide the student to suggest that the counters could be counted to be sure.)



Help the student reconstruct each addition operation to its **opposite** subtraction operation and then record it.

$3 + 5 = 8$
$8 - 3 = 5$
$5 + 3 = 8$
$8 - 5 = 3$

$1 + 7 = 8$
$8 - 1 = 7$
$7 + 1 = 8$
$8 - 7 = 1$

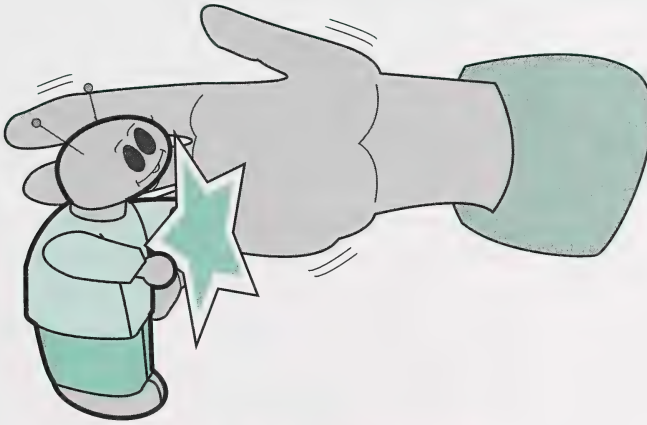
Monitor the student's progress. Discuss and correct any errors.

Activities

Teaching Tip



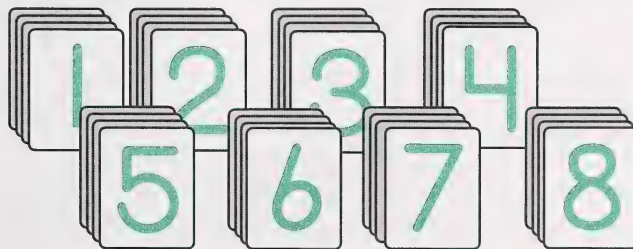
Continue to emphasize the **relationship** between addition and subtraction in future activities, because this will be an ongoing concept for the student to learn.



Applying the Concept

Take Eight

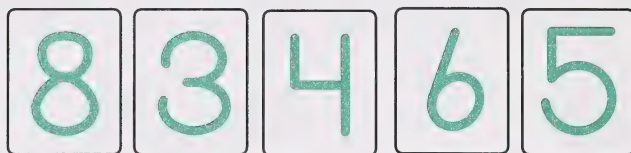
For this game, you need 32 cards, four each of the numbers one to eight. You can use playing cards or make a set of your own, for example, four kinds of stickers attached to hand-numbered cards.



The object of the game is to take turns finding all the eight cards and the pairs of cards that make a sum of eight until the pile of cards has been used.

Step 1: Shuffle the game cards.

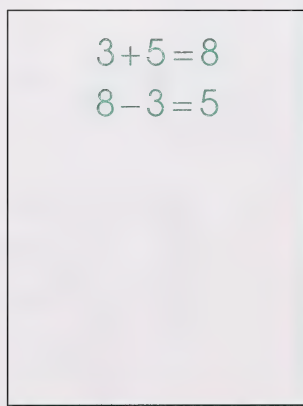
Step 2: Have the student place any five cards face up on the table, and put the rest face down in a pile.



Step 3: First, look at the five cards on the table for any eight cards or **pairs** of cards that make a sum of eight.

If the player finds an eight card, then that is a free card. If the player finds a pair of cards that make a sum of eight, have the player print a matching addition sentence on a piece of paper. For example, if the cards three and five are added together, the sum is eight. The matching addition sentence is $3 + 5 = 8$.

Step 4: After an addition sentence is recorded, print a direct opposite subtraction sentence. For $3 + 5 = 8$, that would be $8 - 3 = 5$ or $8 - 5 = 3$.



Step 5: Turn over one new card from the pile for every card used until the pile of cards has been used. Continue until the pile of cards has been used.

Enrichment (optional)

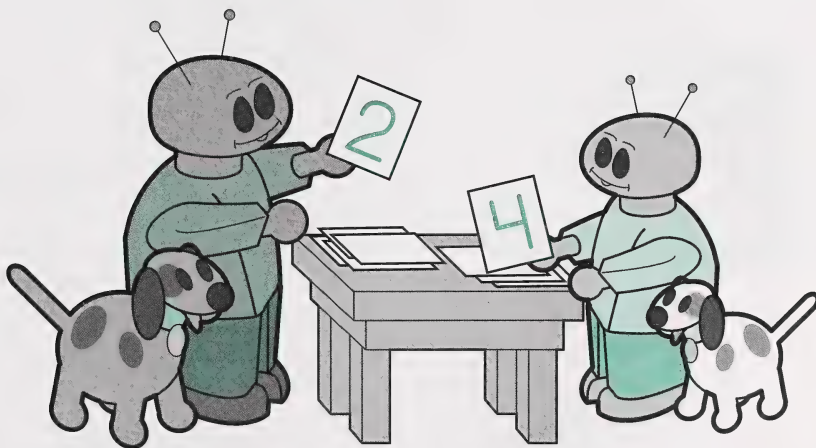
Addition and Subtraction “Snap”

Step 1: Gather a collection of counters and 25 index cards for two people to play the game.

Step 2: Help the student print a number from zero to four on each card so that there are five cards for each number.

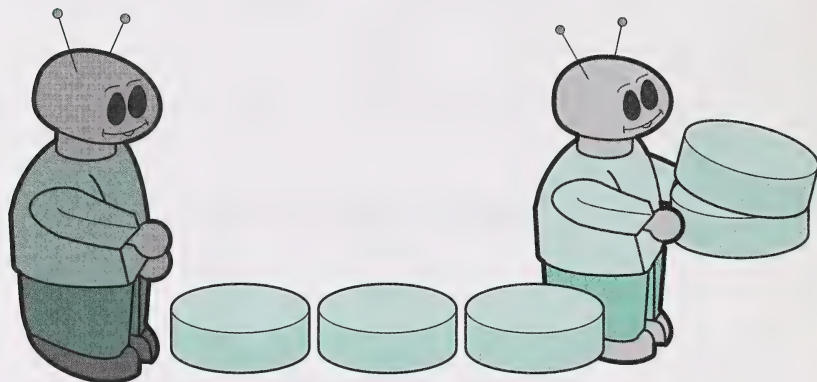


Step 3: Shuffle the cards and deal them so that each player's cards are face down in a pile. Decide on a number up to eight to use as a sum.

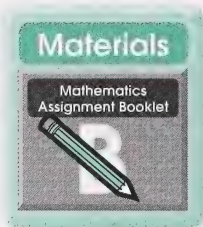


Step 4: Have both players turn over their top cards at the same time. If the numbers on the two cards add up to your chosen sum, the player who says “Snap” first takes both cards. For example, if your chosen sum is five and the two cards turned over are two and three, the first player to say “Snap” takes the cards.

Step 5: The player who did not say “Snap” first can regain a card by using counters to reconstruct the addition sentence into a subtraction sentence. For example, the addition sentence $2 + 3 = 5$ can be reconstructed into $5 - 2 = 3$ or $5 - 3 = 2$.



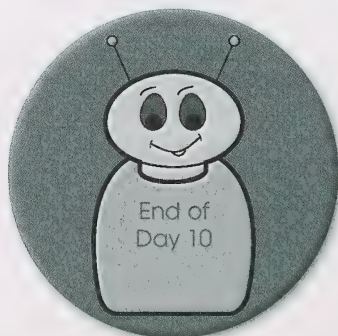
Step 6: Play for 10 to 15 minutes, and then count and compare how many cards each player has.



Turn to Mathematics Assignment Booklet 4B, and follow the directions to do Day 10: Assignment 1.

Next, follow the directions to do Day 10: Assignment 2.

Then complete Day 10: Learning Log. Under Student's Thoughts, print a sentence or two telling what the student thinks about this day's mathematics learning. For example, was it easy to change an addition number sentence into a subtraction number sentence?



Day 11



Calendar Time

Time recommended: 10 minutes

Begin with Calendar Time activities as usual.

Focus for Today

Time recommended: 45 minutes

- adding and subtracting, using sums and differences to eight
- recognizing and using the relationship between addition and subtraction to solve problems

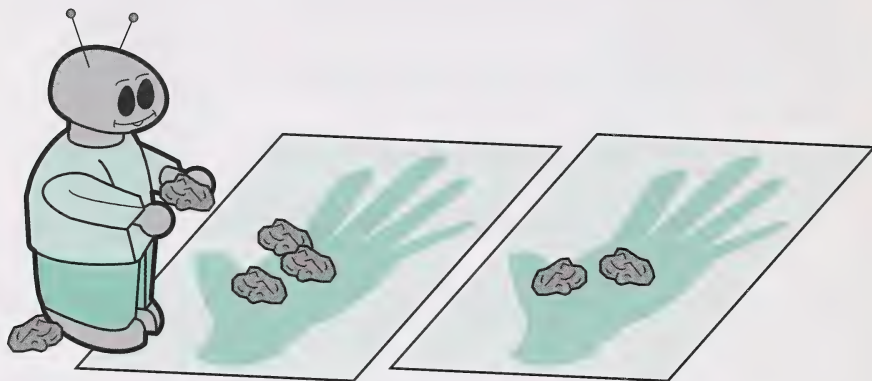


Vocabulary (spoken only)

trace
match

Materials Required

- materials on the master list of required materials
- hand mats made in Module 3
- collection of very small counters, such as pebbles, candies, or raisins

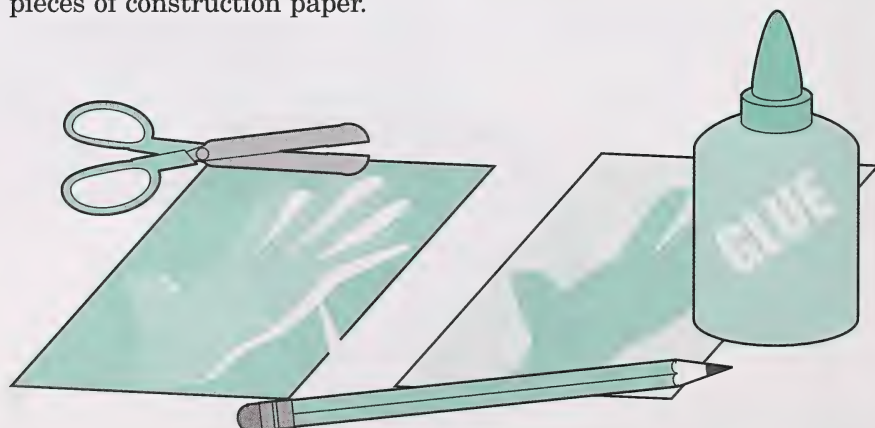


Developing the Concept

Hand Mats

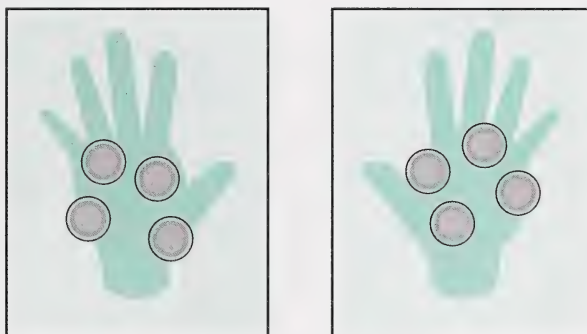
If you did not make hand mats in Module 3, use construction paper now to **trace** around both of the student's hands. Trace both of your hands as well.

Cut out the hand shapes and glue them separately onto four other pieces of construction paper.



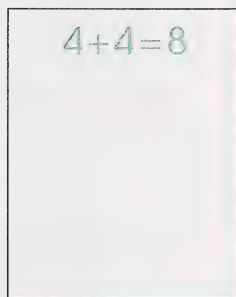
Gather a collection of small counters. You could use food items, such as raisins, because you and the student can then eat the counters as you show take-away situations. If you do choose food counters, you will need approximately 100 items.

Place four counters on one of the student's hand mats and four counters on the other.

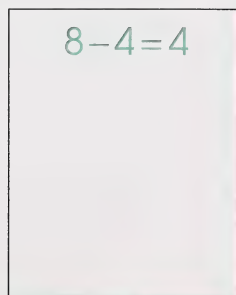


Ask the student to print the matching number sentence on a piece of paper.

The student should print $4 + 4 = 8$.

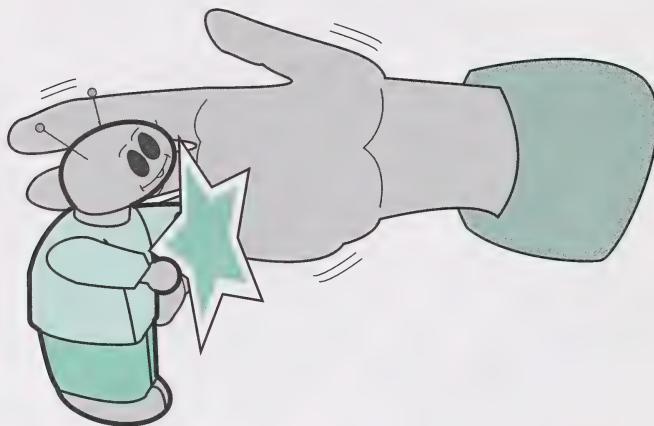


Ask the student to take away the items from one of the hand mats and then print a subtraction sentence to match the situation.



Take turns placing counters on each other's hand mats and printing addition and subtraction sentences for about 15 minutes. Check each other's sentences for correctness.

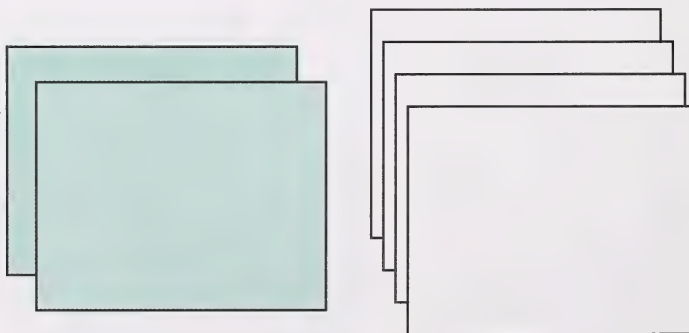
Keep the hand mats for future activities.



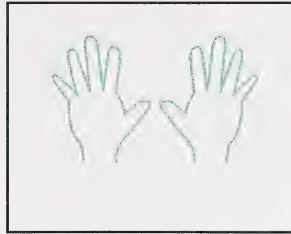
Applying the Concept

What's in My Hands?

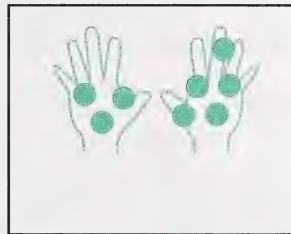
Step 1: Take out four sheets of unlined paper to make the inside pages of a booklet and two sheets of construction paper for a cover and back page.



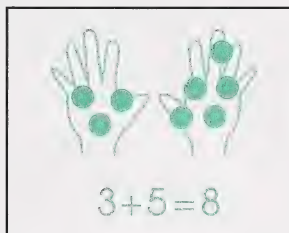
Step 2: Help the student trace left and right hand shapes on a sheet of unlined paper.



Step 3: Have the student draw a set of counters on each shape. The sum of the two sets should be no greater than eight.



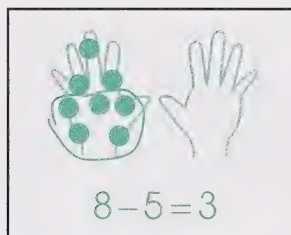
Step 4: Ask the student to print the addition number sentence below the illustrations.



Step 5: Help the student again trace left and right hand shapes on a second sheet of unlined paper.

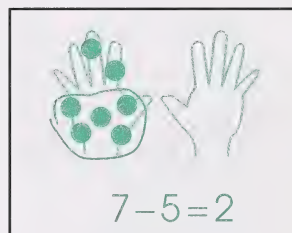
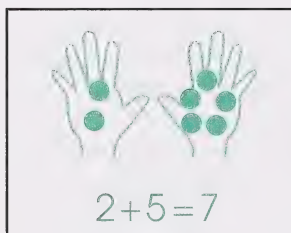


Step 6: This time have the student draw the sum of the first illustrations all on the left hand. Then ask the student to circle the number that was previously on the right hand. In this situation, that number will be subtracted from the original sum.



Have the student print the matching subtraction number sentence below this illustration.

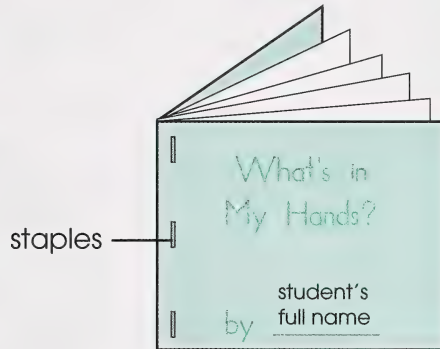
Step 7: Use the same procedure to make one more addition page and one more subtraction page. Remember to have the student print the corresponding number sentences.



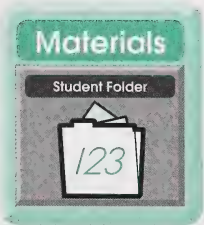
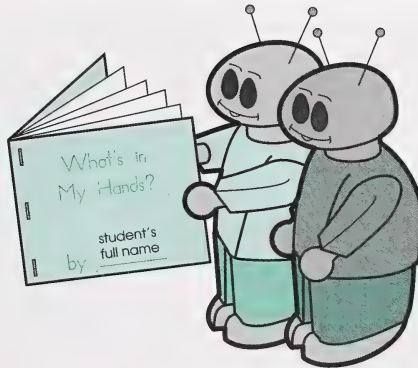
Step 8: Have the student make a cover page with one sheet of construction paper.



Step 9: Staple the cover pages and inside pages together to make a booklet. On the back, have the student print the abbreviated form of the module and day numbers, M4D11.



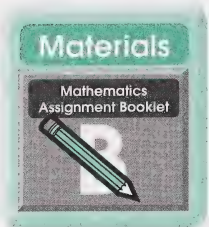
Step 10: Have the student talk about **What's in My Hands?** booklet with family and friends.



When the booklet is not being shared with others, place it in the Student Folder.

Enrichment (optional)

If your student needs extra help or a challenge today, choose an enrichment activity from a previous day.



Turn to Mathematics Assignment Booklet 4B, and follow the directions to do the assignment for Day 11.



Day 12



Calendar Time

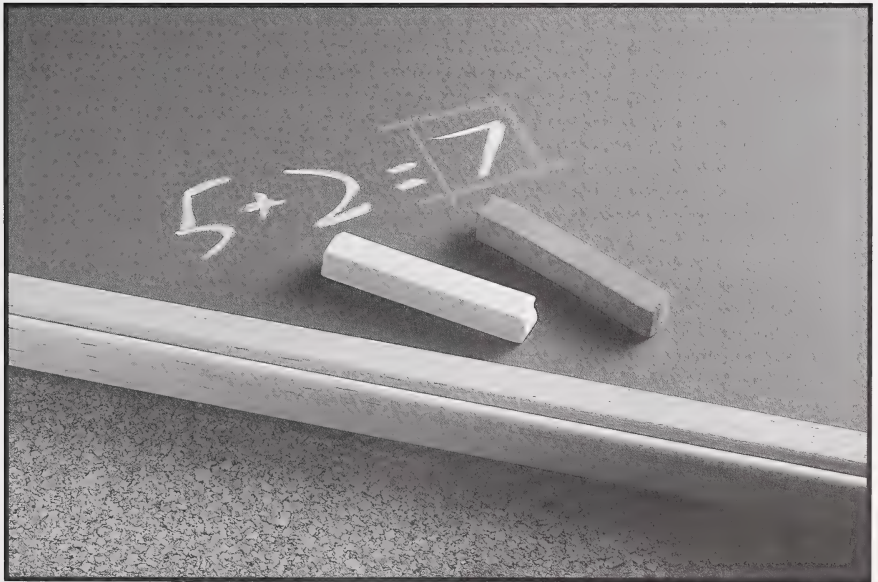
Time recommended: 10 minutes

Begin with Calendar Time activities as usual.

Focus for Today

Time recommended: 45 minutes

- adding, using sums to eight
- counting forward to ten from a given number
- identifying the greater of two numbers

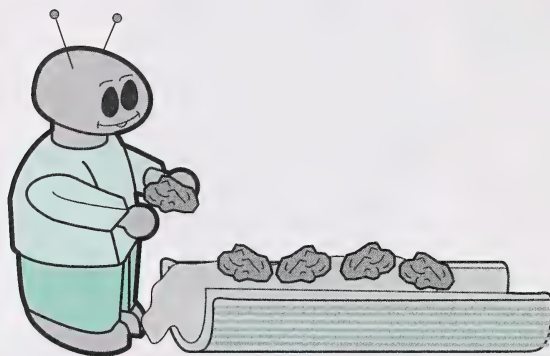


Vocabulary (spoken only)

counting forward
greater

Materials Required

- materials on the master list
- eight pennies
- purse or wallet
- raisins
- celery and peanut butter or cheese spread (optional)
- paper bag or another suitable container (optional)



Developing the Concept

Place eight pennies and an empty purse or wallet in front of the student. Have the student put four pennies in the purse or wallet and leave four on the table. Proceed with the following script.



You put 4 pennies in the purse (wallet), and you left 4 pennies on the table.

How many pennies are there in total?

Begin by **counting forward** from 4, because we know there are 4 pennies in the purse.

4, 5, 6, 7, 8. There are 8 pennies in total.

To find the answer, we counted forward from the number 4.

Now, I will put 6 pennies in the purse. Put them in.

How many pennies are left on the table? (2)

If you count forward from the number 6, how many pennies are there in total? (6, 7, 8)



The student who accepts starting from a given number and then counts on is **counting forward**.

Given the same situation, a student who starts over at one and counts to eight is still at the stage of counting by using one-to-one correspondence. That student needs continued practice with the following:

- counting manipulative objects
- counting forward
- recognizing subsets within greater sets
- changing sets by one or two members

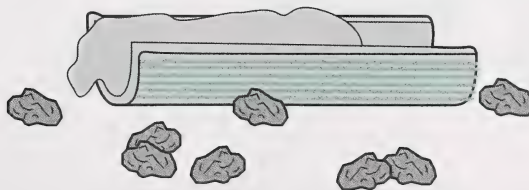
Have your student start from the **greater** number when counting forward. Research has shown that children will use the counting-forward strategy, but they generally do not start with the greater number when counting forward.

Comment later in Day 12: Learning Log on your student's ability to count forward.

Applying the Concept

Ants on a Log

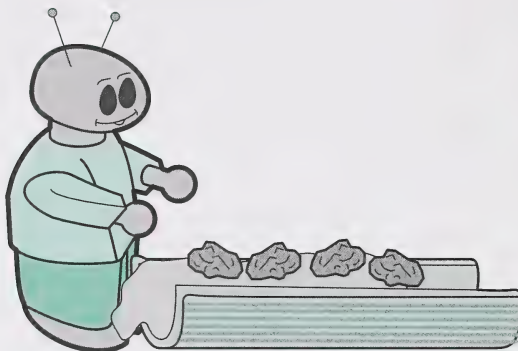
For this activity, use raisins for ants. Make a log from construction paper, or use celery sticks, with peanut butter or spreadable cheese in the grooves. You can eat the food items after this activity.



Print the first half of the number sentence $4 + 2 = 6$ on a piece of paper or chalkboard. Use the following script.

The **first** half of this number sentence says
 $4 + 2$ equals.

Place 4 ants on your log.



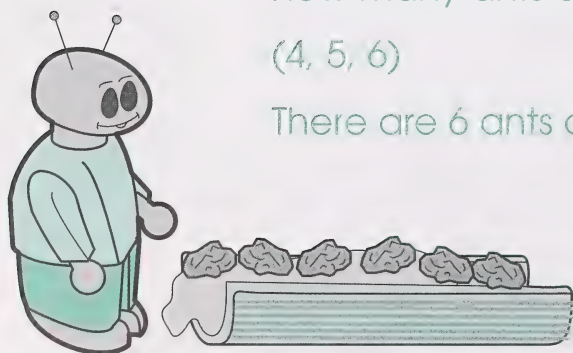
Now, add the 2 remaining ants to your log.

Which is the **greater** number, the 4 or the 2?
(4)

Count forward from the number 4 to find out
how many ants are on the log in total.

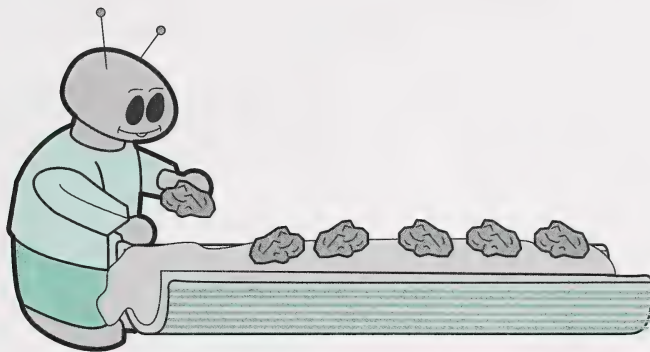
(4, 5, 6)

There are 6 ants on the log in total.



Continue this activity with other number combinations for sums up to eight. For example, have the student count forward when the greater number in the number combination is 2, 3, 5, 6, or 7.

While placing ants on a log, the student could chant or sing the following verses to the tune of “If You’re Happy and You Know It.”



Ants on a Log

There are four ants on the log, on the log.
There are four ants on the log, on the log.
There are four ants on the log,
And they are being hogs.
There are four ants on the log, on the log.

Two ants want to come along, come along.
Two ants want to come along, come along.
Two ants want to come along,
So add them, add them, add them.
Two ants want to come along, come along.

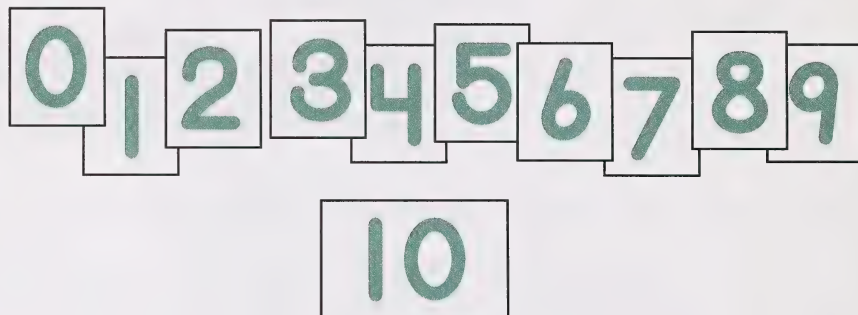


Repeat the original verses two or three times, substituting other number combinations with sums to eight.

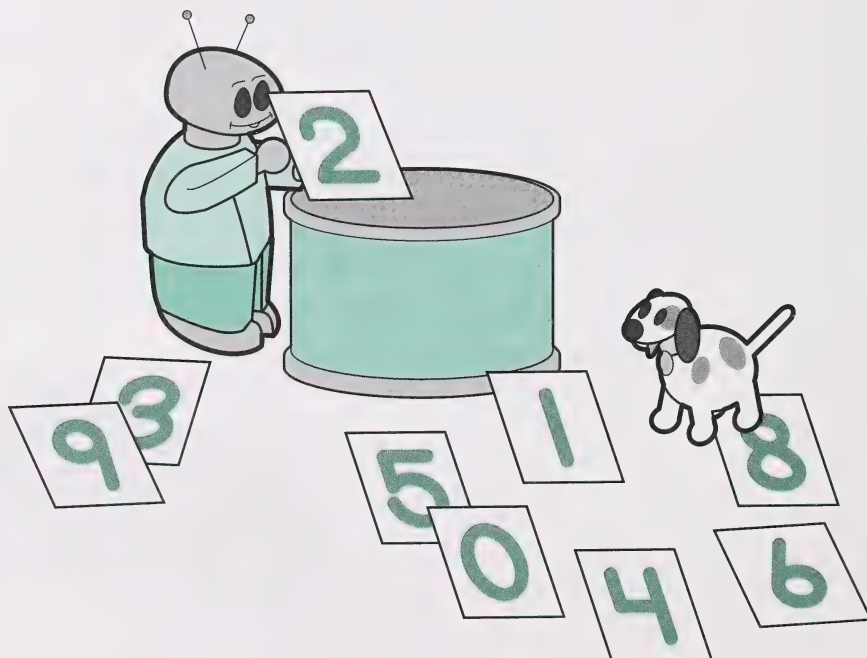
Enrichment (optional)

Pick a Card

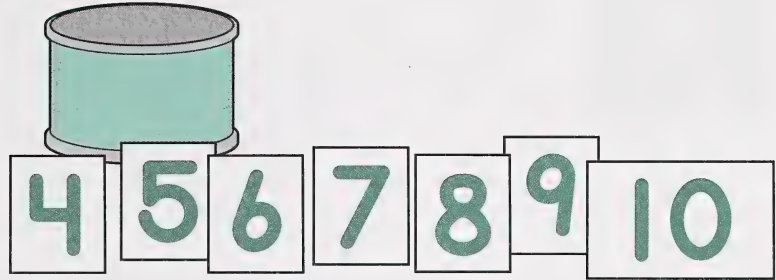
Step 1: Cut five recipe cards in half. Have the student print a number from zero to nine with a felt marker on each card section. Print the number ten on an uncut card.



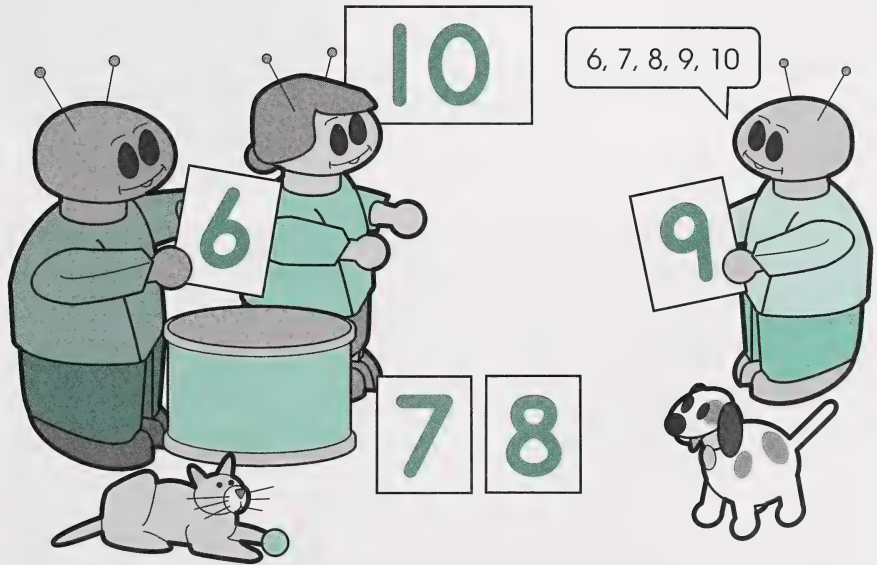
Step 2: Mix up the smaller cards, and place them in a container.

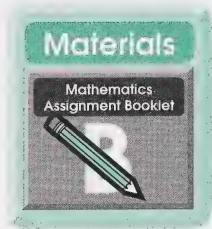


Step 3: Choose a card from the container, and place it face up on the table. Beginning with that card, use the other number cards to **count forward** to ten. Place the cards in order, ending with the number ten card.



Step 4: Take turns choosing a number card from the container and counting forward to ten.

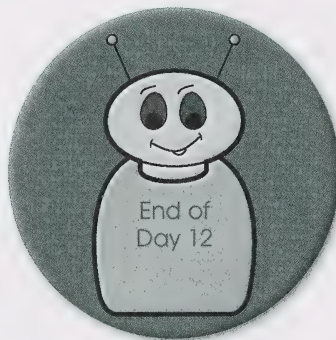




Turn to Mathematics Assignment Booklet 4B, and follow the directions to do Day 12: Assignment 1.

Next, follow the directions to do Day 12: Assignment 2.

Then complete Day 12: Learning Log. Under Student's Thoughts, print a sentence or two telling what the student thinks about this day's mathematics learning. For example, is it easy to count forward?



Day 13



Calendar Time

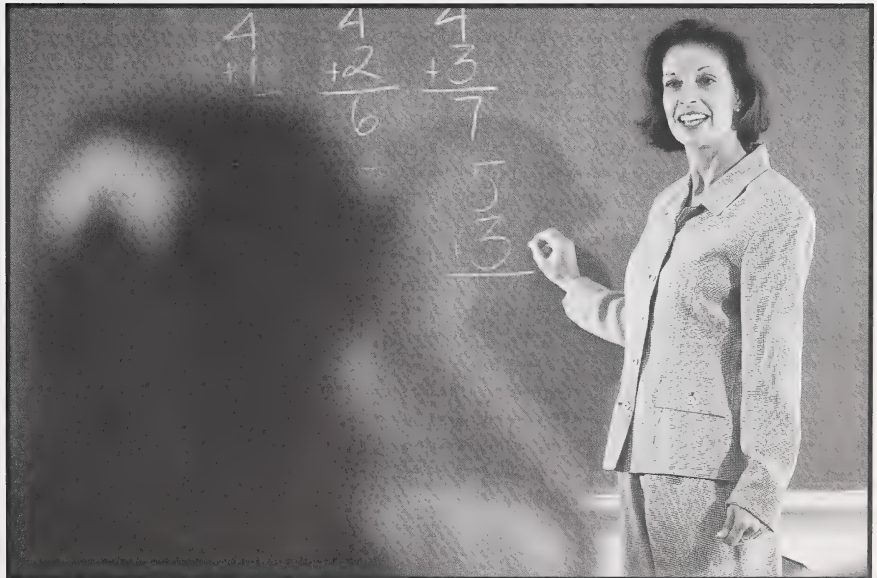
Time recommended: 10 minutes

Begin with Calendar Time activities as usual.

Focus for Today

Time recommended: 45 minutes

- adding and subtracting, using sums and differences to eight
- identifying the greater of two numbers
- recognizing and using the connection between addition and subtraction operations to solve problems
- identifying true and false number sentences

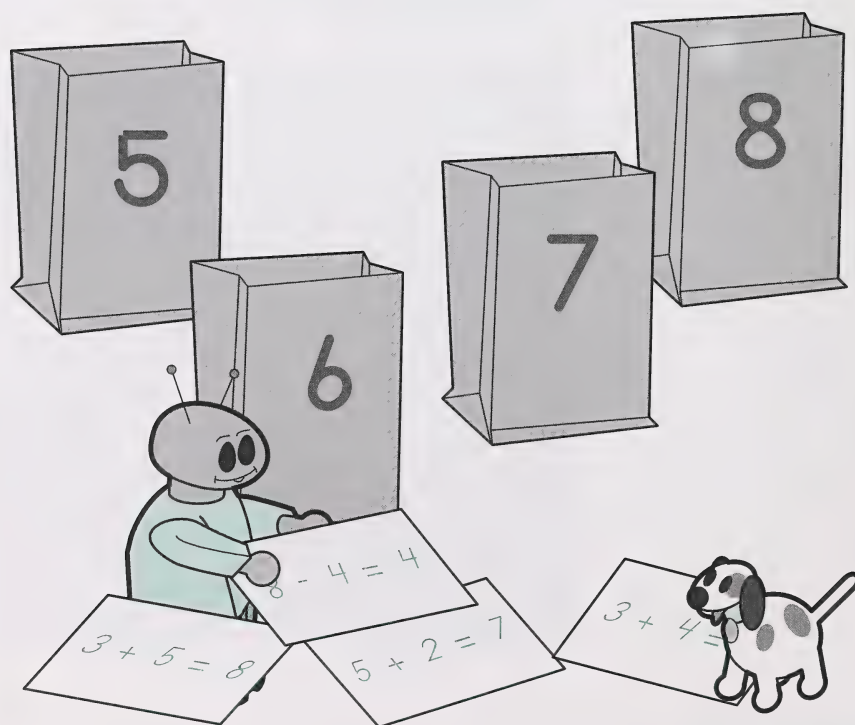


Vocabulary (spoken only)

true
false/untrue
opposite
counting forward
counting backward
greater
column

Materials Required

- materials on the master list
- four brown lunch bags
- addition and subtraction number-sentence cards for sums and differences from five to eight
- collection of counters
- one die



Developing the Concept

Today, your student will work with the concepts of true and false and review sums and differences to eight.



Look for signs that your student is beginning to relate addition operations to the **opposite** subtraction operations.

Some students may not yet be ready to connect these operations. Such students need more experience joining and separating manipulative objects.

It is helpful to talk about the relationship between addition and subtraction operations while the student is involved in them.

Observe how your student determines the sum or difference of two numbers.

- Does the student **count forward** or **backward** from the **greater** number?

For example, if the first half of a number sentence is $5+3$ or $5-3$, does the student begin at the greater number and then count forward or backward, depending on whether the operation is addition or subtraction?

- Does the student perform a physical action each time when counting?

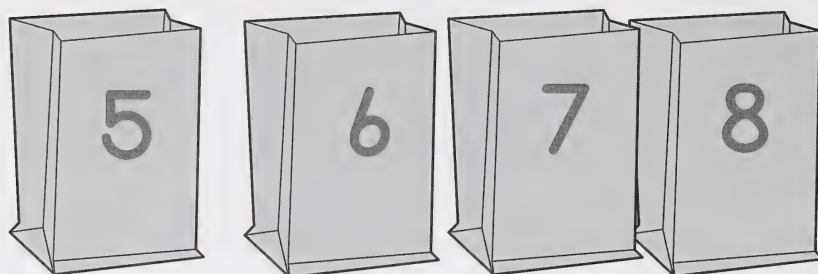
For example, does the student need to move the objects or touch each object?

- Does the student have more difficulty counting from some numbers than from other numbers?

Comment on your observations later in Day 13: Learning Log.

True-or-False Game

Step 1: Label four brown lunch bags with the numbers 5, 6, 7, and 8. These numbers refer to sums and differences. Gather some counters and the addition and subtraction number-sentence cards for sums and differences from five to eight.



Step 2: Make two false number sentences for each sum and difference from five to eight, using blank index cards. See the examples below.

$$2+4=5$$

$$8-7=6$$

$$8-6=5$$

$$2+5=6$$

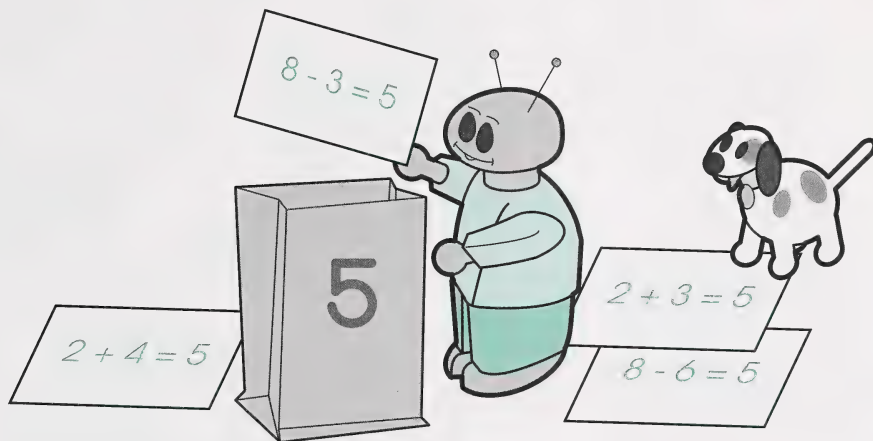
$$2+6=7$$

$$3+2=8$$

$$8-4=7$$

$$8-3=8$$

Step 3: Place both the true and false number sentences in the appropriate bags. For example, in the bag labelled 5, put such true number sentences as $8 - 3 = 5$ and $2 + 3 = 5$ plus the two false number sentences that show a sum or difference to five.



Step 4: Instruct the student as follows.

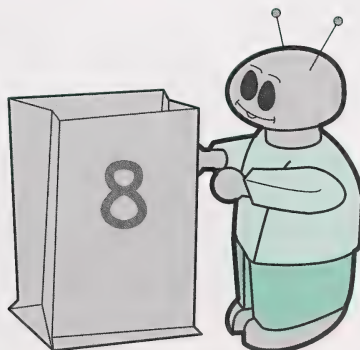


Today, you will be a detective.

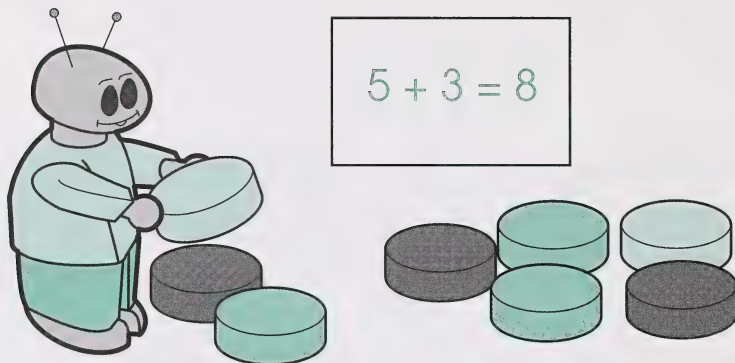
You will search these bags for **false**, or **untrue**, number sentences.

Pick a card from the bag marked 8.

Use your counters to prove that this number sentence is **true** or **false**.



For example, if the card shows $5 + 3 = 8$, the student should count one set of five counters and one set of three counters and then state the total amount.



Use the script as a guide.

If the total amount equals the number on the side of the bag, it is a true number sentence.

If the answer does **not** equal the number on the side of the bag, it is a false number sentence.

Place the false number sentences in a pile on the **left** side of the bag.

Your answer to the **first** half of the number sentence $5 + 3$ is 8, and you took this number sentence out of the number 8 bag.

The number sentence is true.

Place this true number sentence in a pile on the **right** side of the bag.

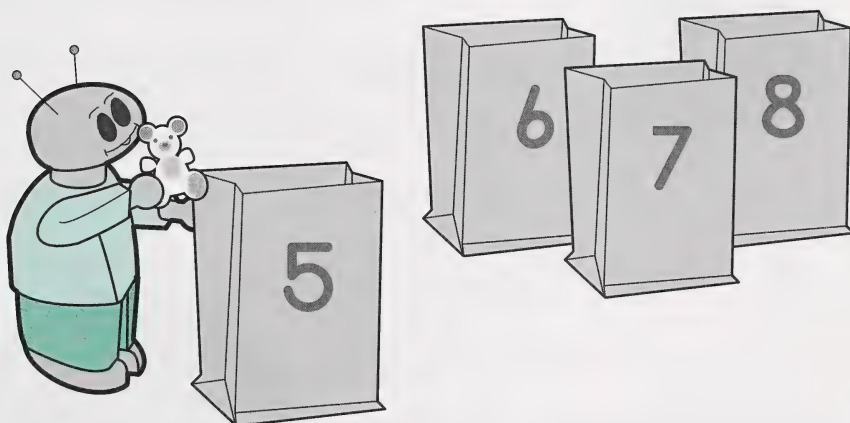
Have the student pick out another number sentence and prove by using counters whether it is true or false. Carry on until all the number sentences have been proven true or false. Pile false cards on the left sides of the bags and true cards on the right sides.

Keep the numbered bags and the number-sentence cards for future use, such as the following activity.

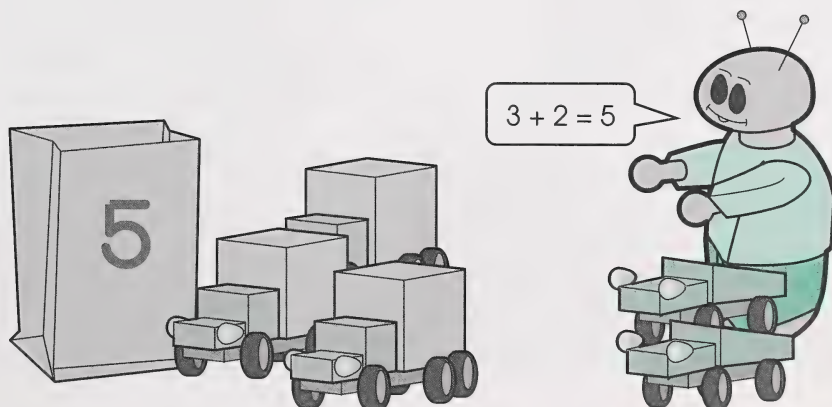
Applying the Concept

Bags Full of Stories

Step 1: Gather some counters, and place a matching number of objects in each numbered bag. For example, if a bag is numbered five, place five small objects inside.

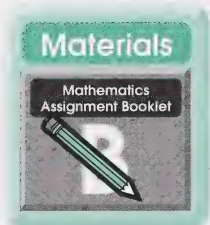


Step 2: Take turns dumping out the contents of the bags and telling stories about them. For example, “I have three trucks and two cars. Three trucks plus two cars equals five vehicles in total.”



Enrichment (optional)

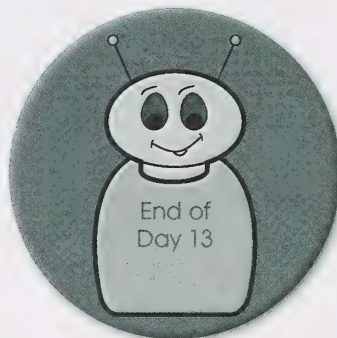
If your student needs extra help or a challenge today, choose an enrichment activity from a previous day.



Turn to Mathematics Assignment Booklet 4B, and follow the directions to do Day 13: Assignment 1.

Next, follow the directions to do Day 13: Assignment 2.

Then complete Day 13: Learning Log. Under Student's Thoughts, print a sentence or two telling what the student thinks about this day's mathematics learning, for example, about the ability to identify true and false number sentences.



Day 14



Calendar Time

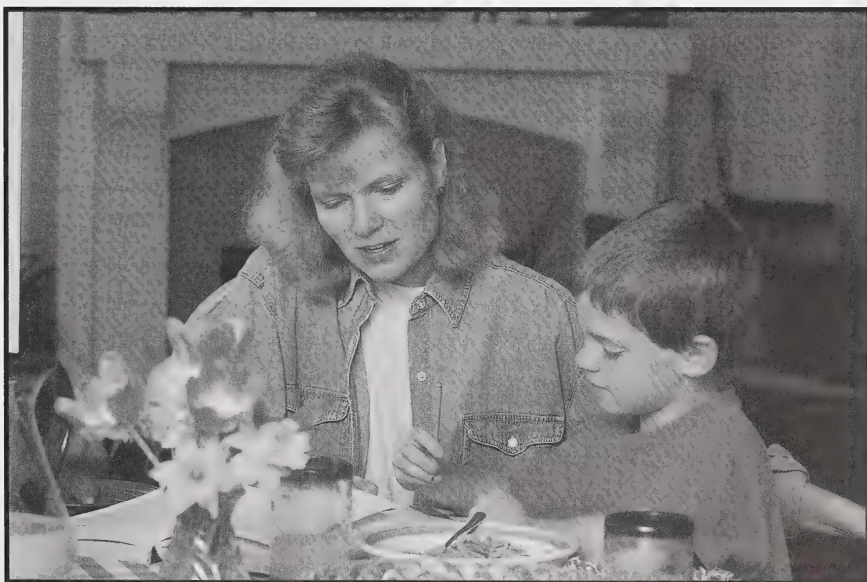
Time recommended: 10 minutes

Begin with Calendar Time activities as usual.

Focus for Today

Time recommended: 45 minutes

- adding sums and subtracting differences to eight
- identifying the greater of two numbers
- recognizing and using the connection between addition and subtraction operations to solve problems
- counting forward and counting backward

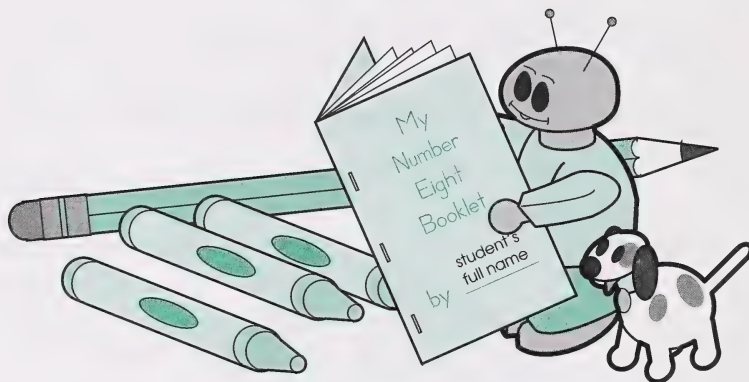


Vocabulary (spoken only)

counting forward
counting backward
strategy

Materials Required

- materials on the master list
- old catalogues and magazines (optional)
- collection of counters



Developing the Concept

In this activity, the student will work only with sums to eight.

On unlined loose-leaf paper, list the following addition sentences with sums of eight.

$1+7=8$	$5+3=8$
$7+1=8$	$4+4=8$
$2+6=8$	$8+0=8$
$6+2=8$	$0+8=8$
$3+5=8$	

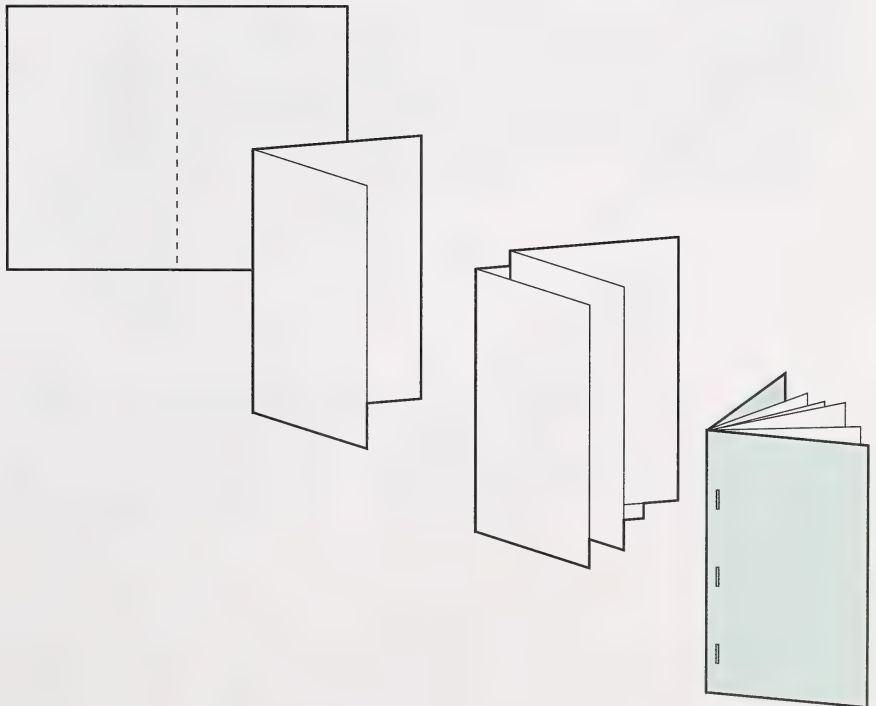
For each addition sentence, print a subtraction sentence that starts with eight.

$8 - 7 = 1$	$8 - 3 = 5$
$8 - 1 = 7$	$8 - 4 = 4$
$8 - 6 = 2$	$8 - 0 = 8$
$8 - 2 = 6$	$8 - 8 = 0$
$8 - 5 = 3$	

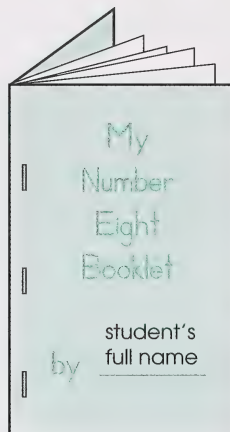
Applying the Concept

My Number Eight Booklet

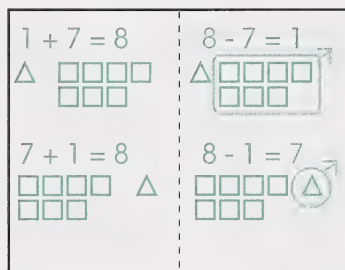
Step 1: Help the student fold four unlined papers in half and stapling one side. Use the illustrations below to help guide the student.



Step 2: Have the student print the title **My Number Eight Booklet** on the front cover. Add the student's full name as author and illustrator.

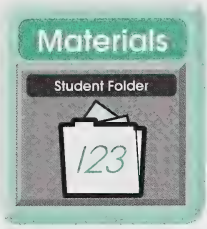


Step 3: Inside the booklet, have the student print and illustrate opposite addition and subtraction operations that are based on a total of eight. The student can draw illustrations or use pictures from catalogues and magazines.

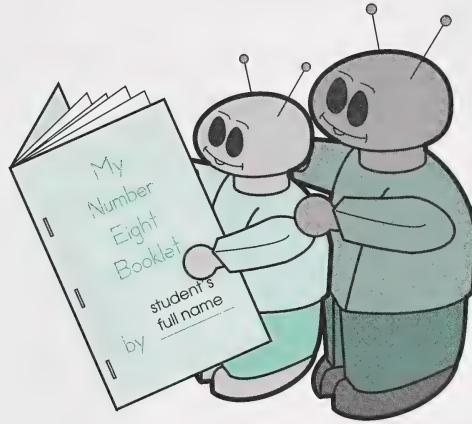


Step 4: Ask the student to print the abbreviated form of the module and day numbers, M4D14, on the back cover of the booklet.

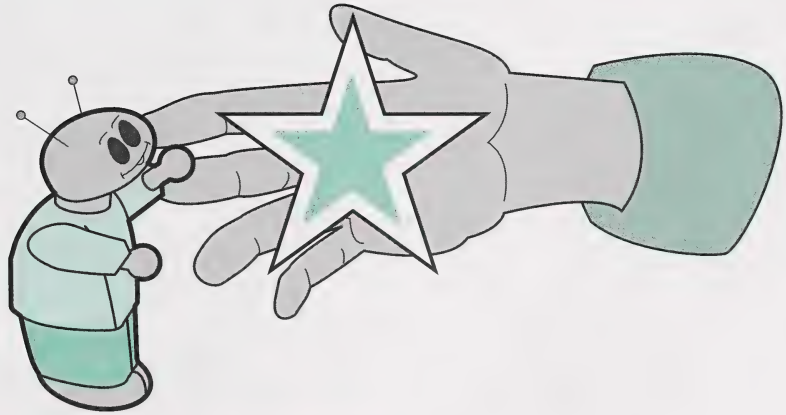




Step 5: Before placing the booklet in the Student Folder, have the student talk about it with family and friends.



Consider giving the student a pat on the back, a star, a stamp, or a sticker when the activity has been completed with care and effort.



Enrichment (optional)

If your student needs extra help or a challenge today, choose an enrichment activity from a previous day.

Day 14 • Mathematics

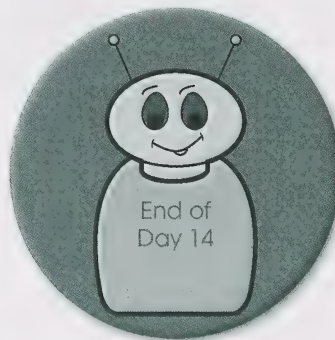
Materials

Mathematics
Assignment Booklet



Turn to Mathematics Assignment Booklet 4B, and follow the directions to do Day 14: Assignment 1.

Next, follow the directions to do Day 14: Assignment 2.



Day 15



Calendar Time

Time recommended: 10 minutes

Begin with Calendar Time activities as usual.

Focus for Today

Time recommended: 45 minutes

- adding sums and subtracting differences to eight
- reviewing other names for given numbers five to eight

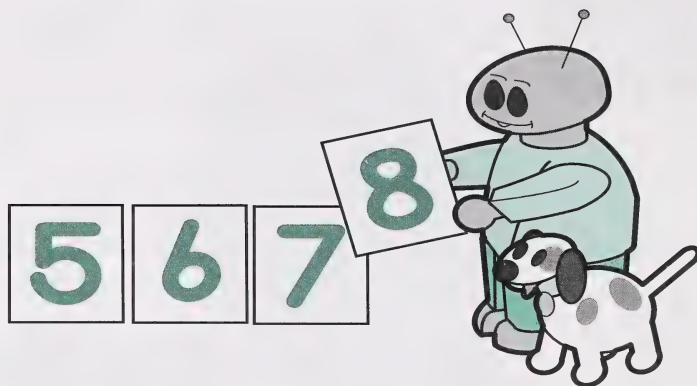


Vocabulary (spoken only)

number names
different

Materials Required

- materials on the master list
- domino mats from Day 9
- the 5 to 8 number cards
- collection of counters
- number-sentence cards for sums and differences from five to eight



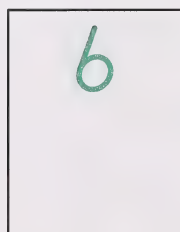
Developing the Concept

Number Name Booklet

Today, the student will practise sums and differences to eight and review the concept of other names for given numbers. For example, $5 + 0$ is another name for 5.

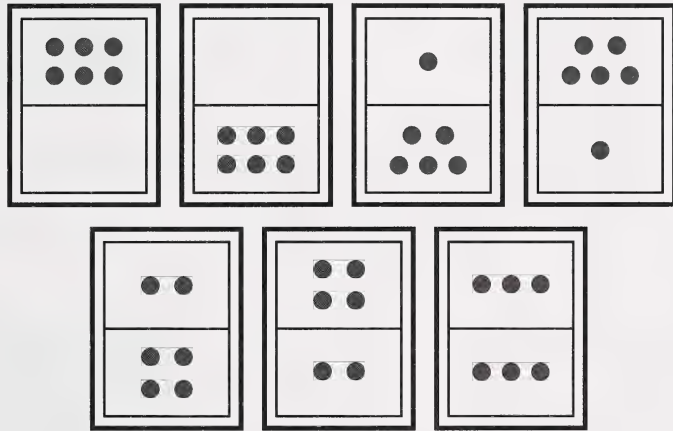
Gather the domino mats, the 5 to 8 number cards, and a collection of counters.

Place the number cards face down in a pile. Ask the student to turn the top card face up and print the card number at the top of a piece of paper.

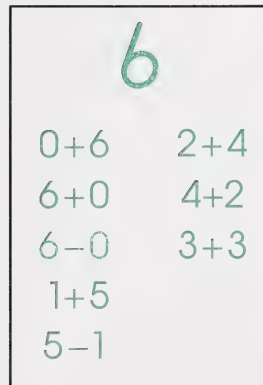


Ask the student to place that number of counters on the domino mats to show all possible addition and subtraction **number names** for the chosen number. For example, if the student turned up the number 6, the following number names could be shown with six counters.

$6+0$	$1+5$	$2+4$	$3+3$
$0+6$	$5+1$	$4+2$	$6-0$



Have the student print each number name on the paper.



Take turns choosing number cards and using counters to make all possible addition and subtraction combinations for the chosen numbers. Check that each other's number names are correct and all possible names have been included.

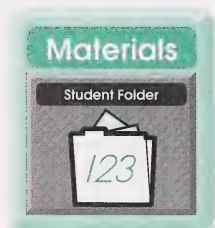
Record the number names for each number from five to eight on a separate piece of paper. Then have the student make a cover page similar to the one below.

My
Number
Name
Booklet

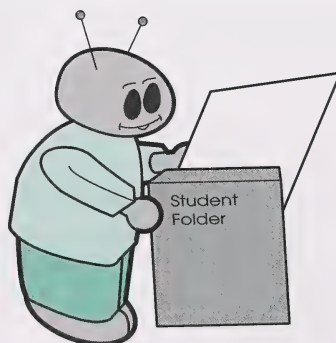
by student's
full name

Staple the cover page, the four number-name pages, and a back page together to make a booklet. Have the student print the abbreviated form of the module and the day numbers, M4D15, on the back.

M4D15



Ask the student to use the booklet to talk about different names for the numbers five to eight. Then place this booklet in the Student Folder for submission on Day 18.



Applying the Concept

Number Name Game

Step 1: Gather the 5 to 8 number cards and the number-sentence cards for sums and differences from five to eight. Place the number cards in a line across the top of the table.



Step 2: Use two index cards cut horizontally to make four signs that say **addition** and **subtraction**, as shown below.

Addition	Subtraction
----------	-------------

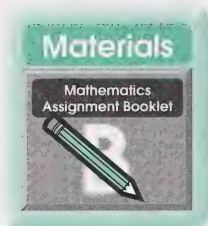
Place these signs below the number cards on the table.

Step 3: Have the student place the number-sentence cards in columns below the matching number cards.

6		7		8	
Addition	Subtraction	Addition	Subtraction	Addition	Subtraction
$0 + 6$	$6 - 0$	$0 + 7$	$7 - 0$	$4 + 4$	$8 - 0$
$5 + 1$	$7 - 1$	$5 + 2$	$8 - 1$	$3 + 5$	
$2 + 4$	$8 - 2$	$6 + 1$		$1 + 7$	
$3 + 3$		$1 + 6$		$5 + 3$	
$1 + 5$		$2 + 5$		$8 + 0$	
$4 + 2$		$3 + 4$		$7 + 1$	
$6 + 0$		$4 + 3$		$0 + 8$	
		$7 + 0$			

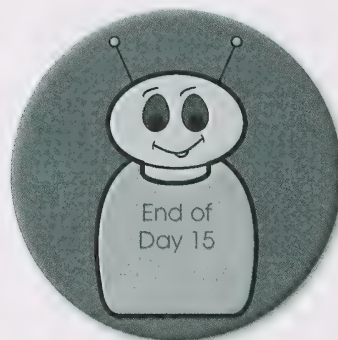
Enrichment (optional)

If your student needs extra help or a challenge today, choose an enrichment activity from a previous day.



Turn to Mathematics Assignment Booklet 4B, and follow the directions to do the assignment for Day 15.

Then complete Day 15: Learning Log. Under Student's Thoughts, print a sentence or two telling what the student thinks about this day's mathematics learning, for example, about the ability to make other names for a given number.



Day 16



Calendar Time

Time recommended: 10 minutes

Begin with Calendar Time activities as usual.

Focus for Today

Time recommended: 45 minutes

- recognizing objects or pictures that are the same or different
- adding sums and subtracting differences to eight



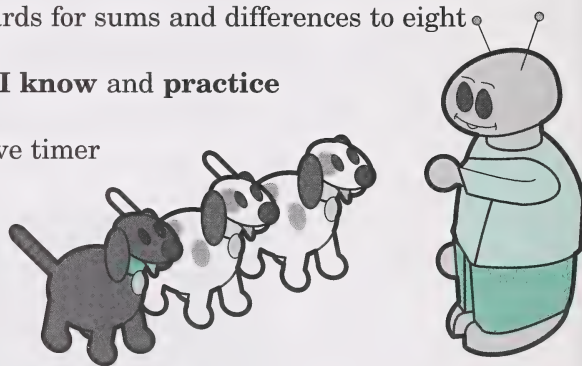
Vocabulary (spoken only)

same/same as
 identical/identical to
 different
 pair/pairing

match/matching
 identical pairs
 identical twins

Materials Required

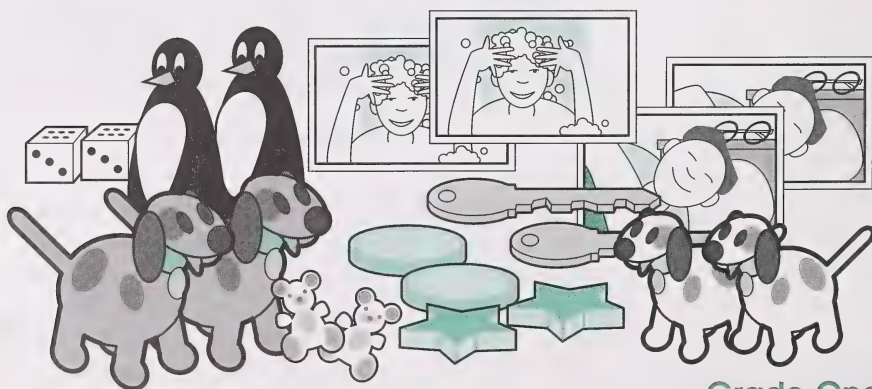
- materials on the master list
- pairs of small identical objects, such as buttons, lids, toys, blocks, and coins
- pairs of identical pictures, such as ones cut from copies of the same catalogue
- letter cards made by cutting index cards in half
- number sentence cards for sums and differences to eight
- containers labelled **I know** and **practice**
- timer, such as a stove timer



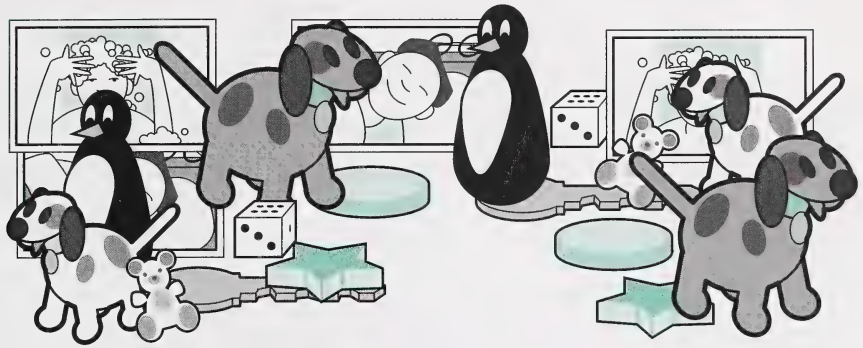
Developing the Concept

Today, your student will review sums and differences to eight and identify items that are the **same**, or **identical**, and **different**.

Help the student gather ten pairs of objects and pictures that are the **same**, or **identical**, such as those suggested in Materials Required. Glue the pictures onto construction paper so they will last longer.



Mix up the ten pairs of identical objects and pictures.



Use the following script.

Find 2 objects that are the **same**, or **identical**.

Why are they identical? Discuss.

Choose a third object or picture that is slightly different from the first two, and put it beside the two identical items. Proceed as follows.

This looks like the **pair** of identical items that you chose.

Do you think it is like the pair you chose?

Discuss.

How is this one **different**? Discuss.

Applying the Concept

Match Me

Make letter cards from the index cards that were cut in half. Use letters that spell out the student's name or a secret word, such as **identical** or **different**. Then mix up the objects and pictures from the previous activity and say the following.

We can play a game called **Match Me**.

I will choose an object (picture).

You find another item that is the **same as**, or **identical to**, mine.

You can get a letter from a secret word for every correct **match** that you make.

Then you can figure out the secret word.

Discuss the student's reasons for **pairing** objects. If necessary, help the student match **identical pairs** and decode the secret word.

Five-Minute Practice

Gather the number-sentence cards for sums and differences to eight and the containers marked **I know** and **practice**.

Set a timer for five minutes, and show the cards to the student, covering each answer. Have the student repeat the whole number sentence from each card, filling in the answer. If the student is unable to answer after one minute, say the number sentence and tell the answer.

Place the number sentences that the student knows in the **I know** container and the others in the container labelled **practice**.

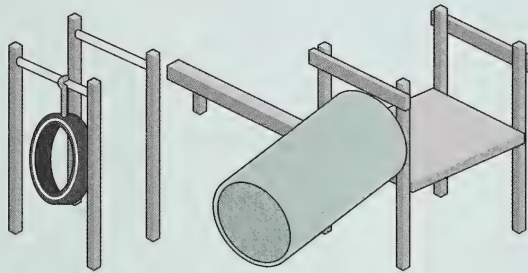


Enrichment (optional)

Find the Identical Twins



This activity would be an effective review of solids and shapes. For example, the student could match cylinder solids on playground equipment.



Explain to the student that the term **identical twins** refers to two people who look exactly the same.

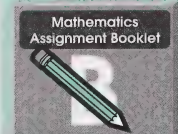
For this game, however, the student can pretend to be a detective looking for pairs of identical objects around the house, in the yard, or in the community.

List the names of identical pairs on an unlined piece of paper.

fence posts
bike tires
ice cubes

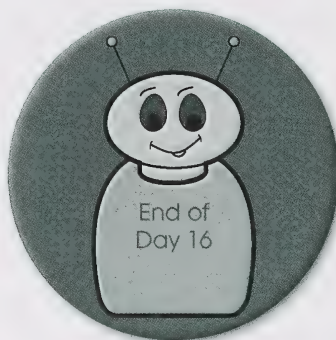
Day 16 • Mathematics

Materials



Turn to Mathematics Assignment Booklet 4B, and follow the directions to do Day 16: Assignment 1.

Then follow the directions to do Day 16: Assignment 2.



Day 17



Calendar Time

Time recommended: 10 minutes

Begin with Calendar Time activities as usual.

Focus for Today

Time recommended: 45 minutes

- counting to 15
- identifying addition and subtraction situations

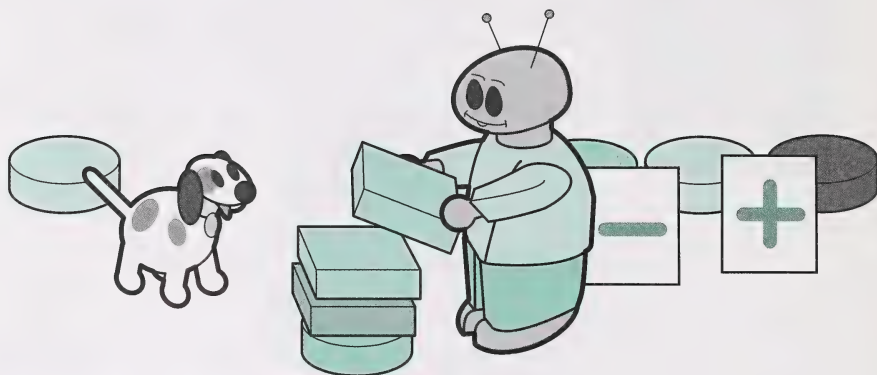


Vocabulary (spoken only)

broth
total
operation sign

Materials Required

- materials on the master list
- plus and minus sign cards
- collection of counters



Developing the Concept

Read the following rhyme twice with your student. Discuss what **broth** is, if the student does not know.

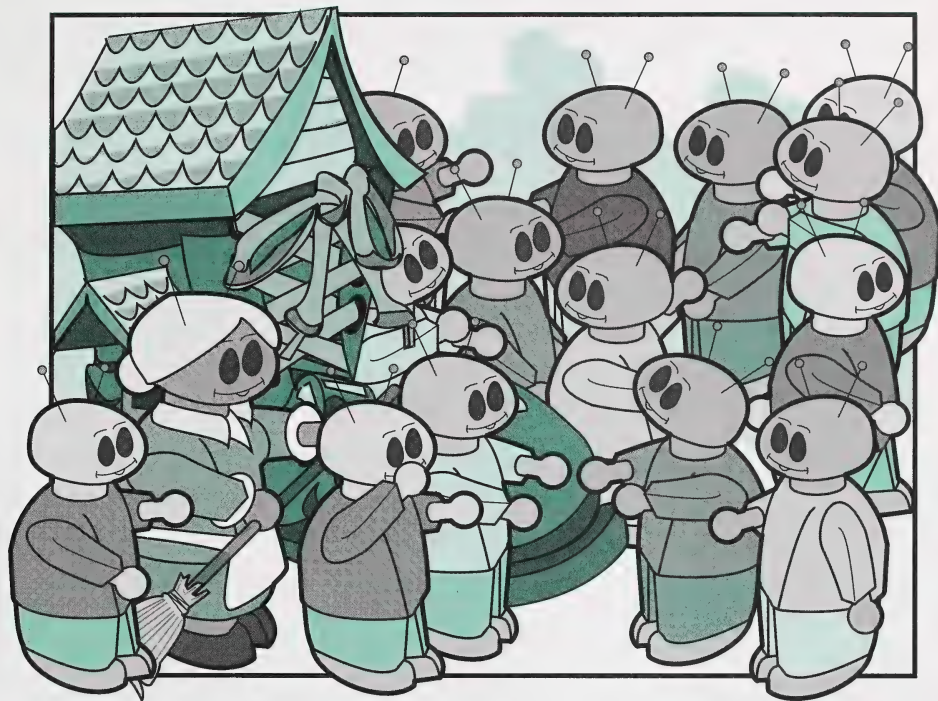
== The Old Woman Who Lived in a Shoe ==

There was an old woman who lived in a shoe.

She had so many children, she didn't know
what to do.

She gave them some **broth** and plenty of
bread,

Then kissed them all soundly and tucked
them in bed.



Direct the student's attention to the illustration of the rhyme.



Does the rhyme tell how many children the old woman had? (no)

Let's count the children in the picture.

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

There are 14 children in **total**.

Count to 14 with me again. 1, 2, 3, 4 . . . 14

Count how many people are in the picture in **total**.

1, 2, 3, 4, . . . 15

There is a total of 15 people in the picture.

Watch while I print the numbers from 1 to 15 on this chalkboard (piece of paper).

Say the numbers with me while I print them.

Now you print the numbers from 1 to 15 **underneath** the numbers that I printed.

Help the student as necessary.

Applying the Concept



Continue to look for signs that your student is beginning to relate addition situations to the opposite subtraction situations.

As mentioned previously, some children may not yet be ready to make this connection. Students who have difficulty need more experience joining and separating manipulative objects. It is also helpful to talk about the relationship between the two operations while the student is adding and subtracting.

Observe whether your student does the following when determining the sum or difference of two numbers.

- counts forward from the number one
- counts forward or backward from the greater number

For example, if the first half of a number sentence is $5 + 3$, does the student begin at the greater number and then count forward? If the number sentence is $8 - 5$, does the student count backward from the greater number?

- performs a physical action each time when counting

For example, does the student need to move or touch the object?

- has more difficulty counting from some numbers than from other numbers

Comment on your observations later in Day 17: Learning Log.

Place the plus and minus sign cards in front of the student. Use the following script.



Which of these two **operation-sign** cards means to subtract, or take away? ($-$)

Which card means to add? ($+$)

I will tell some stories about the children who lived in a shoe.

You hold up the **operation-sign** card that will help answer each story.

For example, if 3 children went into the shoe and then 2 more went in as well, what **operation-sign** card would help find the answer to how many children went in? (The student should hold up the plus card.)

$$3+2=5$$

5 children went into the shoe.

Now listen to this word problem.

8 children were playing in the yard.

3 children went into the shoe.

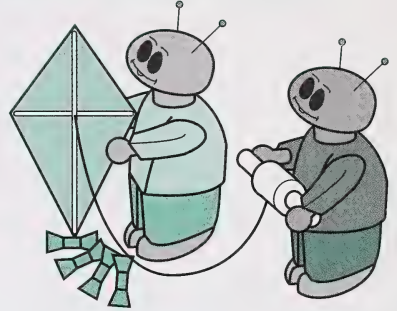
What sign would help find the answer to how many children were left in the yard? ($-$)

$$8-3=5$$

5 children were left in the yard.

Proceed with the following stories. Have the student hold up the appropriate sign card and say the number sentence that would solve each problem.

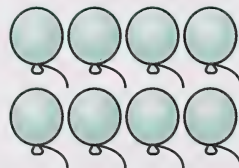
2 children were playing with a kite.
6 children joined them.
How many children were there in total?
($2+6=8$)



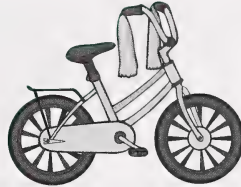
7 children were playing jacks.
3 went in the house.
How many were left? ($7-3=4$)



8 children were playing with balloons.
4 ran away.
How many were left? ($8-4=4$)



2 children were riding bikes.
2 children were roller-skating.
How many were playing in total? ($2+2=4$)



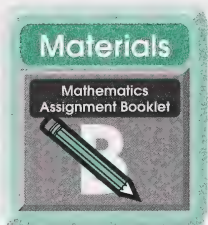
6 children were watering plants.
3 children went to feed the birds.
How many were left? ($6-3=3$)



Enrichment (optional)

Encourage your student to create some number stories for you to solve and check to see whether you choose the correct operation cards.

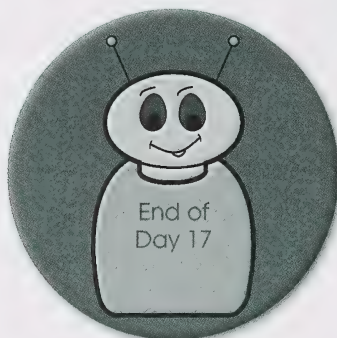
Discuss and correct any errors.



Turn to Mathematics Assignment Booklet 4B, and follow the directions to do Day 17: Assignment 1.

Next, follow the directions to do Day 17: Assignment 2.

Then complete Day 17: Learning Log. Under Student's Thoughts, print a sentence or two telling what the student thinks about this day's mathematics learning, for example, about the ability to identify addition and subtraction situations.



Day 18



Calendar Time

Time recommended: 10 minutes

Begin with Calendar Time activities as usual.

Focus for Today

Time recommended: 45 minutes

- adding, using sums to nine
- conducting a survey to collect first-hand information
- using one-to-one correspondence to construct a picture graph



Vocabulary (spoken only)

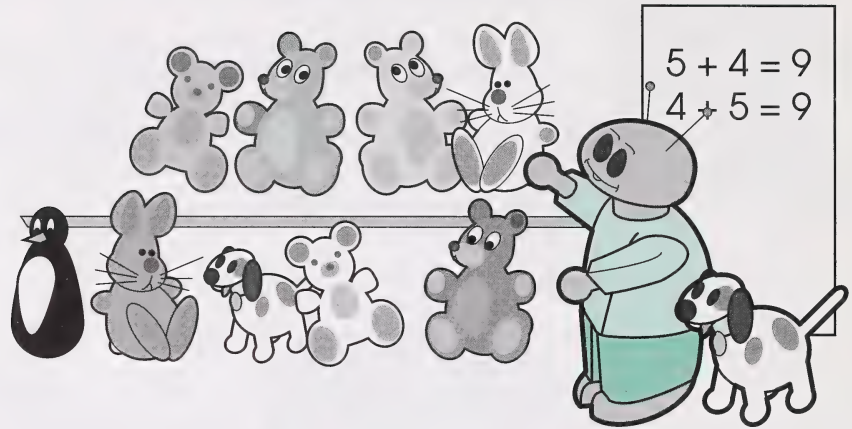
horizontal
nine
another

tally marks
results
survey

picture graph
column
previous

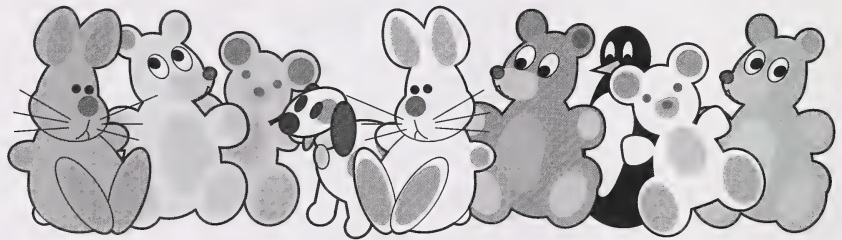
Materials Required

- materials on master list
- nine stuffed animals or other toys or objects



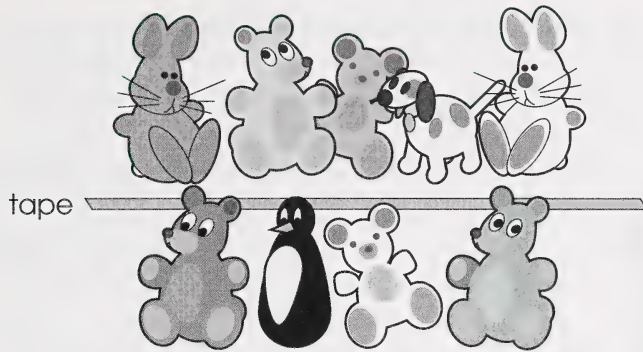
Developing the Concept

Use masking tape to make a **horizontal** line on a table or the floor, and then help the student gather **nine** favourite toys or other objects.



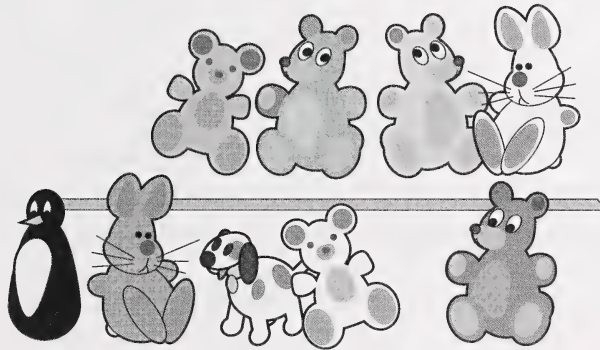
Place five of the objects above the horizontal line and four below.

Have the student tell how many objects there are in total and then print a number sentence to match the placement of the objects.



$$5 + 4 = 9$$

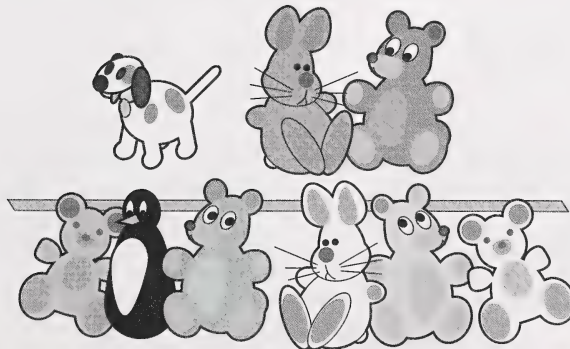
Ask the student to show **another** way to make the number nine and then print a number sentence to match that placement of objects.



$$5 + 4 = 9$$

$$4 + 5 = 9$$

Take turns making various number combinations for nine and printing the number sentences until all possibilities have been recorded.



$$5 + 4 = 9$$

$$4 + 5 = 9$$

$$3 + 6 = 9$$

Applying the Concept

Collecting Information

Have the student ask nine people the following questions.



Would you rather have a dinosaur or an elephant for a pet?

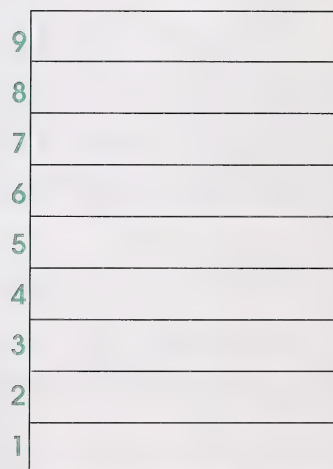
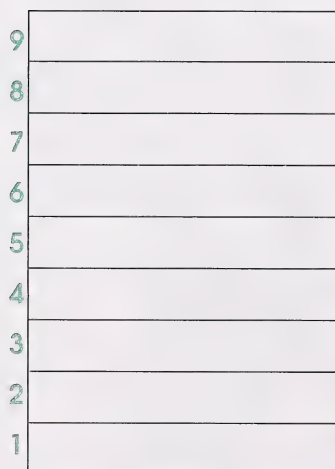
Use **tally marks** to show the **results** of the **survey**, as in the example below.

elephant	
dinosaur	

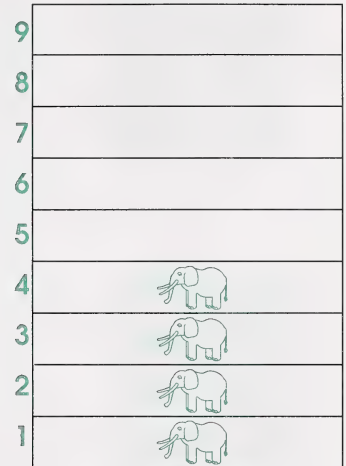
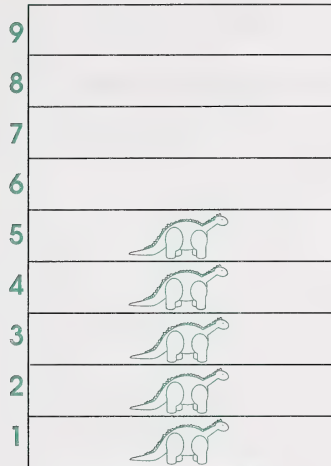
Explain to the student that the number one is shown as | and the number five is shown as |||||.

Help the student use a large sheet of paper to set up a **picture graph** similar to the one shown below.

A Dinosaur or an Elephant for a Pet?

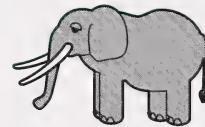
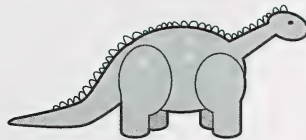


Have the student record the results of the survey by drawing small pictures of dinosaurs or elephants in the appropriate **columns** of the picture graph, as in the example below.



Display the picture graph, and then ask the following questions.

Which pet did most of the people choose?



Why do you think most people preferred this pet?

What is the difference in number between the dinosaur and the elephant?

Encourage the student to ask these questions of other people.

Materials

Mathematics
Assignment Booklet



Turn to Mathematics Assignment Booklet 4B, and follow the directions to do Day 18: Assignment 1.

Next, follow the directions to do Day 18: Assignment 2.

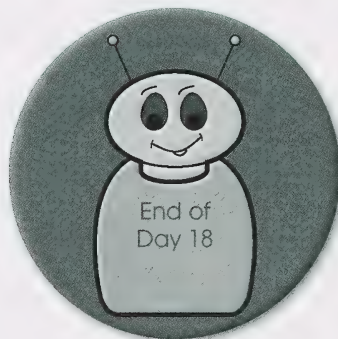
Then complete Day 18: Learning Log. Under Student's Thoughts, print a sentence or two telling what the student thinks about this day's mathematics learning. For example, is it easy to add sums to nine?

Materials

Mathematics
Assignment Booklet



At the end of Mathematics Assignment Booklet 4B, follow the directions to complete Day 18, Student Folder Items. Gather the required materials from your Student Folder. Submit these items to your student's teacher for marking at the time the teacher has requested them.



Congratulations!
You have completed
Mathematics Module 4.

Credits

Some clip art drawings are commercially owned.

Contents

PhotoDisc, Inc.

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